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textile bulletin

JANUARY • 1957

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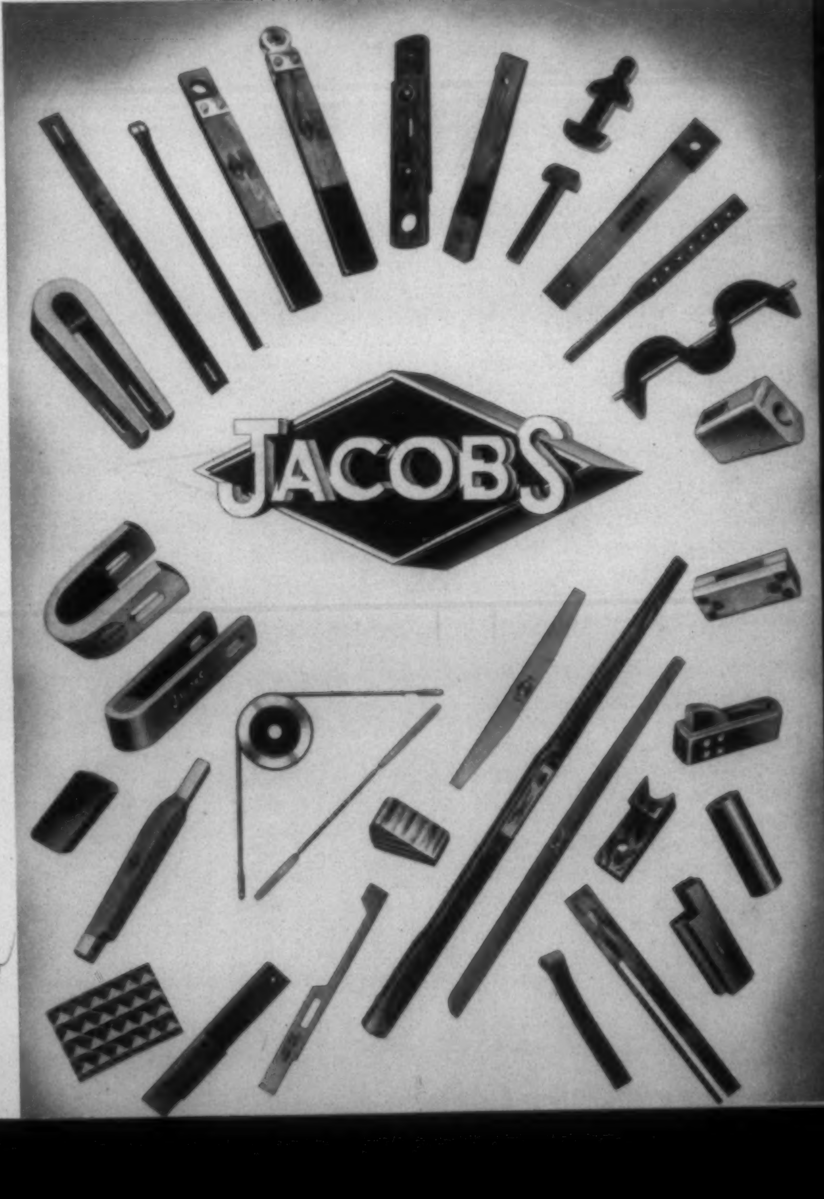
NBP



JACOBS

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SOUTHERN
DIVISION
Charlotte, N. C.

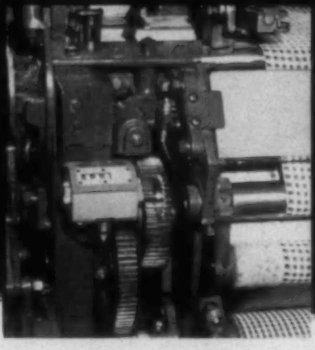
NORTHERN
DIVISION
Danielson, Conn.

THIS COMPLETE VEEDER-ROOT "Control Package"

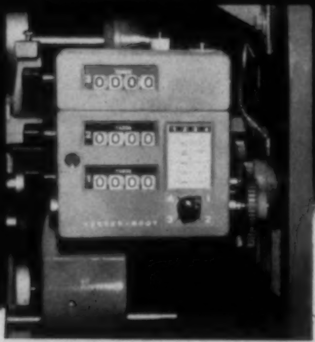
gives you AUTOMATIC UNIFORMITY all through your Mill . . . with New VEEDER-ROOT COUNTERS

. . . on Looms | . . . on Frames

2-3-4 Pick Counter on Loom


Cut Meter on Loom

2-3-4 Hank Counter and Predetermining Counter on Drawing Frame


2-3-4 Yardage Counter and Predetermining Counter on Spinning Frame

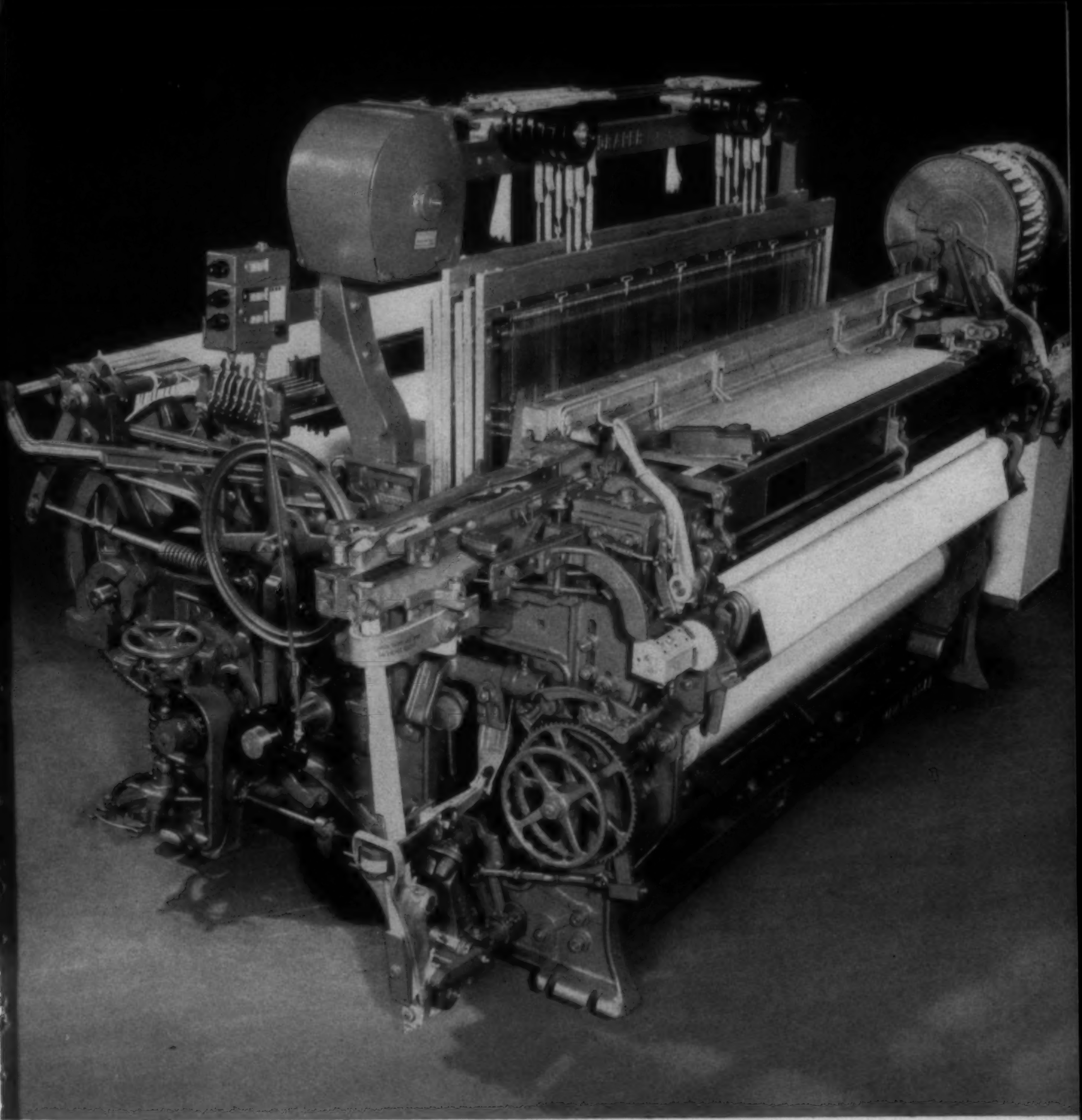
On looms, 2-3-4 Pick Counters keep accurate production records and provide a basis for wage payment . . . while Cut Meters help maintain uniformity of cut-lengths of cloth, which is insisted upon today by the cutting-up trades.

On frames and other preparatory equipment, Hank, Yardage and Predetermining Counters hold can-variation to the minimum . . . and make it possible to run the largest economical packages.

This complete Veeder-Root "*Count*rol Package" adds up to better, automatic uniformity all through the mill. And that's why it pays *any* mill to get this Package of new and modern Veeder-Root Counters, when modernizing present machinery or buying new. Get in touch with the nearest Veeder-Root office *today*.

VEEDER-ROOT
INCORPORATED
"The Name that Counts"

HARTFORD 2, CONN. · GREENVILLE, S. C.
Chicago 6, Ill. · New York 19, N. Y.
Montreal 2, Canada
Offices and Agents in Principal Cities



This loom gives you all the competitive advantages

Long range flexibility, practical and economical operation, higher production, increased efficiency and a new low in maintenance cost are major benefits offered by the new Draper X-2.

The changing fashions in cotton and synthetics create a need for a loom which can be converted on short notice to weave a wide variety of fabrics.

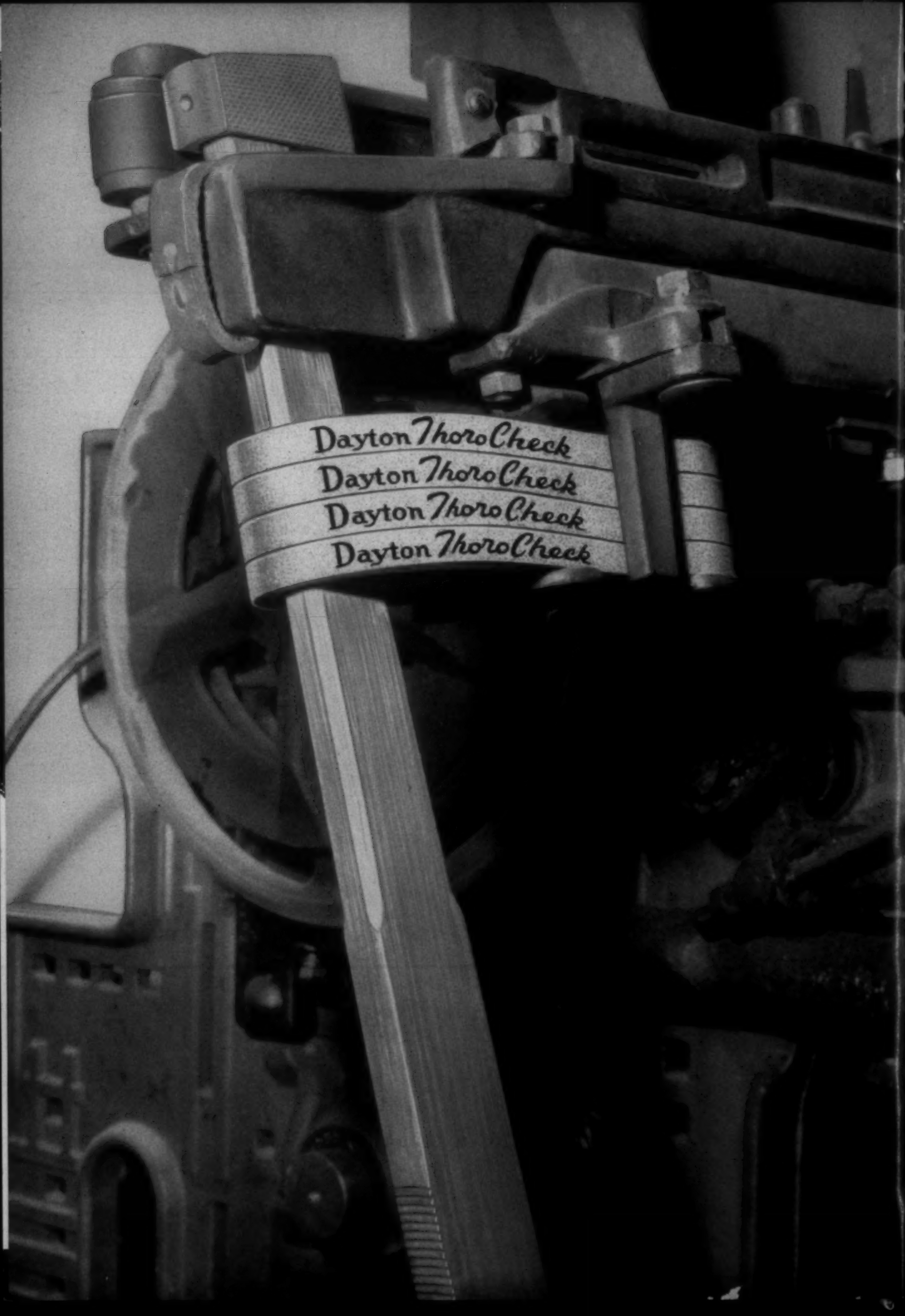
The X-2 with its ability to weave cottons or synthetics equally well, answers this conversion problem.

The combined advantages of the Draper X-2 mean . . . higher mill profits.

DRAPER CORPORATION

Hopedale, Mass. *Atlanta, Ga.* *Greensboro, N. C.* *Spartanburg, S. C.*

790433


Dayton Thoro Check
Dayton Thoro Check
Dayton Thoro Check
Dayton Thoro Check

Ho
in

How to improve picker action and reduce costs in the 3 vital areas of shock and wear

Better shuttle control, improved picker-stick checking and lower maintenance costs result when Dayton Loop Pickers, Check Straps and Lug Straps are installed in combination.

Mill supervisors have learned the important savings to be had from Dayton Thorobred Loop Pickers, Endless ThoroCheck Straps or Thorobred Lug Straps, alone. Now, they are reasoning, the way to get even greater advantages is to install the *entire* combination. Scientifically engineered and designed to work *together*, Dayton picking products are built to take the tremendous shock of high speed shuttles, smoothly check picker sticks and accurately deliver the shuttle return. Service life runs 2 to 3 times longer than other similar products. They offer valuable protection to costly loom parts while reducing down-time and replacement costs.

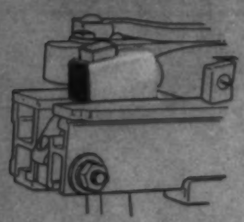
Dayton Thorobred Loop Picker's long service, resistance to wear and accurate shuttle catch are directly traceable to their scientific construction. Their tilted shape assures perfect contact, without strain. Accurate seating to guard against tearing the loop ply is assured by a flared bottom and tapered picker hole design. As a result, they seat snugly into position and cushion millions of contacts without visible wear. Smooth, rounded corners prevent jerked-in fillings.

Dayton Endless ThoroCheck Straps are built to provide strain-free, graduated checking action that eliminates drag over stick. They give fast, Monday morning starts because they're unaffected by temperature or humidity—are not subject to permanent elongation. They outlast other straps repeatedly, in mill tests, by 6 to 8 months. The longitudinal cord adds strength for long, economical service.

Dayton Thorobred Deluxe Lug Straps give longer service because of their one-piece, link-free construction. A molded-in plug absorbs the terrific shock of picker-stick thrusts to add even greater protection for costly loom parts.

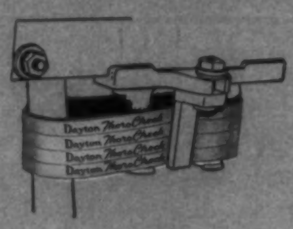
Try any of these amazing Dayton products for immediate improvement in your picking operation. For maximum results and really substantial savings—install the entire Dayton Picking Combination. Your Dayton representative will be calling on you soon to help you get started. Dayton Rubber Co., Textile Division, 401 S. Carolina National Bank Bldg., Greenville, S. C.

Dayton Thorobred Loop Picker



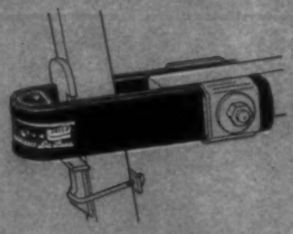
New Design! Narrow back eliminates wear on lay end strap.

Dayton ThoroCheck Straps



Extra economy! Can be replaced singly or in sets.

Dayton Thorobred Deluxe Lug Straps

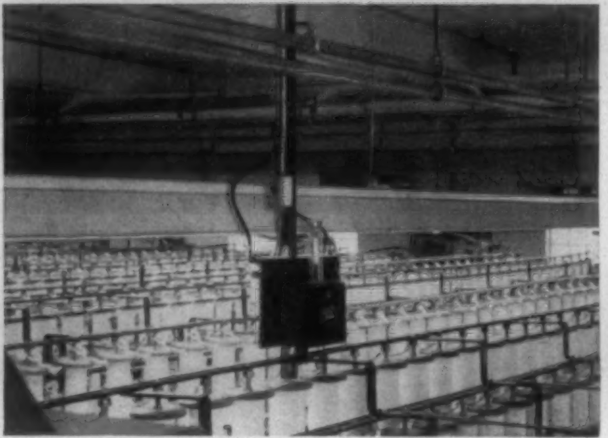


One-piece construction! No rivets or other parts to work loose.

Dayton Rubber

Dayco and Thorobred Products for Better Spinning and Weaving

(C) D.R. 1957

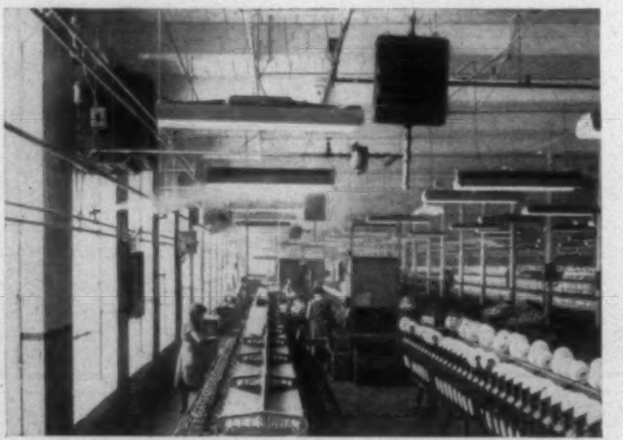


AMCO Humidification System installed at Caron Spinning Company, Robesonia, Pa. The highly sensitive AMCO Cyclestat Control holds humidity within narrow limits.

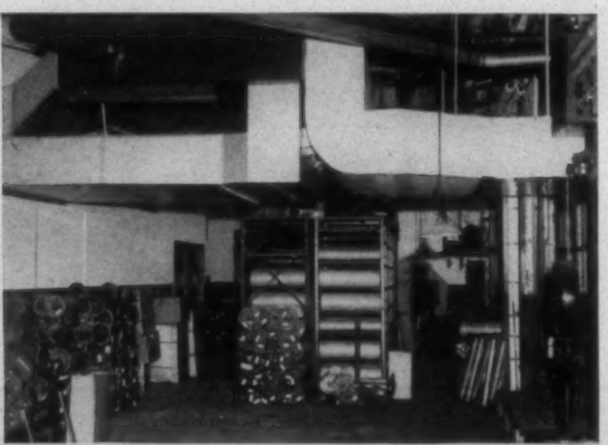
There's an AMCO AIR CONDITIONING SYSTEM designed for YOU!

When you think of air conditioning, remember that AMCO offers systems and equipment for every manufacturing requirement and every climatic condition. There are four different types of AMCO systems, alone or in combination: humidification, evaporative cooling, unit dry-duct, or central station air conditioning. And because AMCO engineers have these four basic systems — plus all associated equipment and controls — they are able to offer you unbiased advice on the *best* system for your particular need.

If you want the facts about textile mill air conditioning, with the advantages and limitations of each system detailed, as well as answers to such questions as cost, adaptability, capacity, maintenance and operating expense, write for AMCO's booklet, "AIR CONDITIONING for the TEXTILE INDUSTRY". Or better still, ask AMCO to recommend, without obligation, the system best suited to your mill.

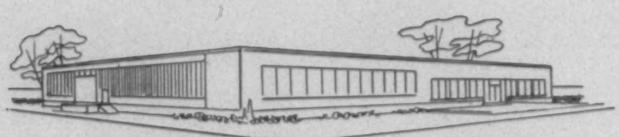


AMCO Evaporative Cooling System in Texas Textile Mills, McKinney, Texas. Note window units which control mixture of fresh and recirculated air.



AMCO Unit Dry-Duct System at The Windsor Manufacturing Company, Philadelphia, Pa. The entire unit is installed overhead out of the way.

AMCO Central Station Air Conditioning in the Roving Dept., Highland Park Mills, Charlotte, N. C. This is AMCO's highly efficient split-system.



New Cleveland-Rowan Plant of the American Moistening Company. This modern plant is located at Cleveland, N. C. for the fabrication of duct work and sheet metal products.

AMCO

AIR CONDITIONING SYSTEMS since 1888

AMERICAN MOISTENING COMPANY, CLEVELAND, NORTH CAROLINA • ATLANTA, GA. • BOSTON, MASS. • CAMDEN, N. J. • PROVIDENCE, R. I.

The above photograph shows a recent installation of the Gossett economy change-over, equipped with Gossett's big new coilers with anti-friction bearings. Size of coiler shown is 16" x 36".

HERE IT IS!

Gossett's BIG Coiler

Gossett Machine Works pioneered the big coiler conversion technique. Now Gossett master technicians have developed a big new coiler . . . bigger and better than ever.

The Gossett Machine Works has been serving textile mills for more than a quarter of a century. So it is not surprising that Gossett technicians have developed a practical, sure way to greatly increase the amount of sliver per can . . . . . and do it at a moderate cost. In fact, more than 100 Southern mills have already installed a complete Gossett coiler conversion. Upon written request, we will be glad to give you the names of these mills.

WHAT WE DO WITH COILERS

1. **We convert 10" and 12" card coilers to 14" through 18" in diameter and 36" to 42" in height.**
2. **We convert either single or double-head 10" and 12" comber coilers to 14" and 15" in diameter and 36" to 42" in height.**
3. **We manufacture parts for all sizes and makes of coilers.**
4. **We manufacture completely new coilers to meet your specifications . . . . all heights and sizes. Choice of sleeve or anti-friction bearings.**

Get Cost of the
Gossett Economy Package on Conversion

We will be glad to give you the cost of a change-over, using our economy package plan which

1. Saves your present pedestal.
2. Allows for all new parts applied to the pedestal . . . . plain or anti-friction bearings.
3. Assures you of all machine finished gears.

B. W. GOSSETT
President

E. C. MASON
Sales Manager

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N. C.-Va. Representative

GOSSETT Machine Works, Inc.
GASTONIA, NORTH CAROLINA

Newest Solvay plant means lower costs
. . . faster service for Southern users

The addition of Brunswick, Ga. as the newest of SOLVAY's strategically located production centers results in quicker deliveries and lower freight rates for Southeastern chlorine and caustic soda users. Liquid caustic soda will be shipped in tank cars and barges, liquid chlorine in single-unit tank cars. Your nearest SOLVAY branch office will give you information on deliveries from this new SOLVAY source.

Aluminum Chloride • Vinyl Chloride • Sodium Nitrite Potassium Carbonate • Calcium Chloride • Caustic Potash Snowflake® Crystals • Sodium Bicarbonate • Soda Ash Ammonium Chloride • Methylene Chloride • Caustic Soda Monochlorobenzene • Ammonium Bicarbonate • Chlorine Carbon Tetrachloride • Methyl Chloride • Chloroform Cleaning Compounds • Para-dichlorobenzene • Hydrogen Peroxide • Ortho-dichlorobenzene

SOLVAY PROCESS DIVISION
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BRANCH SALES OFFICES:
Boston • Charlotte • Chicago • Cincinnati • Cleveland • Detroit
Houston • New Orleans • New York • Philadelphia • Pittsburgh
St. Louis • Syracuse

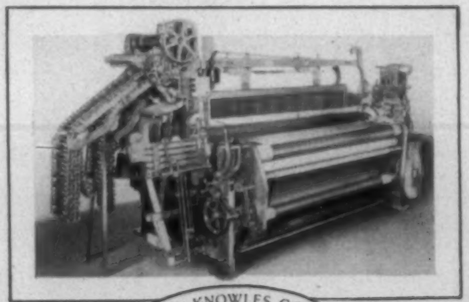
yes, it pays to *dress*

... and not like a mess!

When you see a person walk off with the prizes . . . in *any* walk of life . . . that person is almost always well-dressed, in clothes that are well-woven, cut and tailored. For *good* clothes are badges of self-respect that command respect in others.

Today, the street scene is brighter than ever . . . with new and different fancy fabrics that show more imagination in design than ever before. And the looms that *take the handcuffs off designers* are C&K's new Multi-Purpose line, convertible overnight from plain to fancy fabrics and back again . . . C&K's W3 and W3A Woolen and Worsted Looms with the exclusive Select-A-Pic that puts many non-automatic pick-and-pick fabrics into the profitable field of *automatic* weaving . . . and C&K Jacquards which add almost unlimited magic to many types of fabrics.

Retail slogan of the year is: "Dress right — you can't afford not to." Slogan of the year for every weaving mill should be: "Protect your profits with C&K Fancy Automatic Box Looms — *you can't afford not to.*"



CROMPTON & KNOWLES CROMPTON & KNOWLES CORPORATION C&K WORCESTER MASS. U.S.A.

CROMPTON & KNOWLES *Corporation*

WORCESTER 1, MASSACHUSETTS, U.S.A.

Charlotte, N. C. • Philadelphia, Pa. • Allentown, Pa. • Crompton & Knowles Jacquard & Supply Co., Pawtucket, R. I.
Crompton & Knowles of Canada, Ltd., Montreal, Quebec

IRREGULAR PAGINATION

Service

OK BRAND

NEW UP-TO-THE-MINUTE RESEARCH LABORATORIES

FIELD LABORATORIES

FAST, EXPERT COUNSEL ON YOUR PROBLEMS

Products

OK BRAND

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- **HOMOGIZING PEARL No. 173**
- **WAXY R-GUM No. 10**
- **WAXY FILM No. 75**
- **PRINTEX No. 200**
- **HUBCO No. 30 F.L.**

• • • *make it* EASY *to* IMPROVE *textile sizing, printing, finishing* • • •

OK SERVICE—Top flight textile research men working with the finest of modern laboratory facilities develop better textile starches for you . . . carefully control formulae uniformity. A fleet of Hubinger planes bring OK field laboratories and expert textile technicians right to your door . . . and fast.

OK PRODUCTS—A wide range of profit proven products provide an economical means for improved sizing, printing and finishing. SPECIAL OK TEXTILE STARCHES are *tailor-made* to meet your needs.

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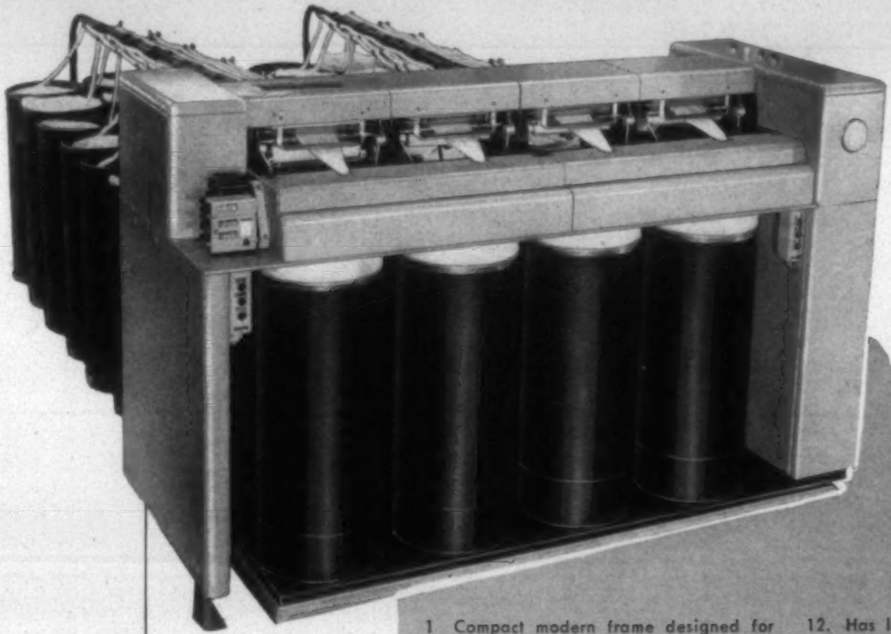
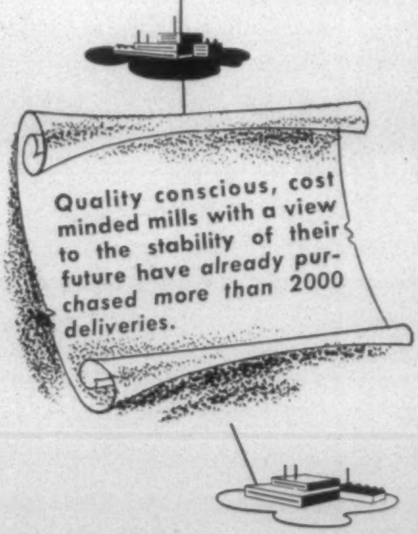
The Hubinger Company

KEOKUK, IOWA

HUBINGER
QUALITY PRODUCTS From CORN
76 YEARS

20 *Good Reasons Why*
SACO-LOWELL'S *New*
VERSAMATIC*
DRAWING FRAME BELONGS IN YOUR MILL





Quality conscious, cost minded mills with a view to the stability of their future have already purchased more than 2000 deliveries.

1. Compact modern frame designed for cost-saving large packages.
2. Front Roll delivery of 250 to 300 feet per minute under average mill conditions.
3. The four deliveries constitute a complete unit permitting flexibility of arrangement and high operating efficiency.
4. Sliver regularity is equal to or better than that obtained from conventional frames operated at low speeds.
5. All rolls are driven independently.
6. Has patented automatic self-cleaning top and bottom clearers with built-in static conductors.
7. Electric stop motions in five positions for better control with indicating lights for increased efficiency.
8. Regular mill runs show an efficiency up to 93%.
9. Individual motor drive is equipped with brake for quick stops.
10. Rigid unit construction of the all-steel chassis assures correct alignment and minimum maintenance.
11. Smooth exterior contours reduce waste, fly accumulation and minimize cleaning.
12. Has large jack shaft under the roller beam to transmit power to the foot-end gearing.
13. Large diameter roll and intermediate gears prevent chatter, provide simple and easy adjustments and facilitate proper meshing.
14. Anti-friction bearings throughout the frame.
15. Lifting rolls and creels for 6 or 8 ends up.
16. Advanced design over arm spring weighting which guarantees accurate pressure.
17. Proven Shaw principle drafting elements can be 3 Over 4 or 4 Over 5.
18. Anti-friction tube gears with new long life high speed drive, eliminating all oiling.
19. Advanced design turntables eliminate lifting at the doffing operation.
20. Gives highest production of quality sliver by every standard — per delivery — per man hour — per square foot of floor space — per horsepower.

For further information and demonstration call your nearest Saco-Lowell office.

*VERSAMATIC DEFINED

VERSAtile . . . adaptable to all fibres, both synthetic and natural, from ¾" to 3".

autoMATIC . . . in all ways except for creeling and doffing.

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60 BATTERYMARCH STREET, BOSTON 10, MASS.
Shops at BIDDEFORD and SACO, MAINE, and SANFORD, N. C.
SALES OFFICES: CHARLOTTE • GREENSBORO • GREENVILLE • ATLANTA

do you know how much

PNEUMAFIL® C.A.H.*

(CENTRAL AIR HANDLING)

can save you on your initial

AIR CONDITIONING

investment and operating costs . . .

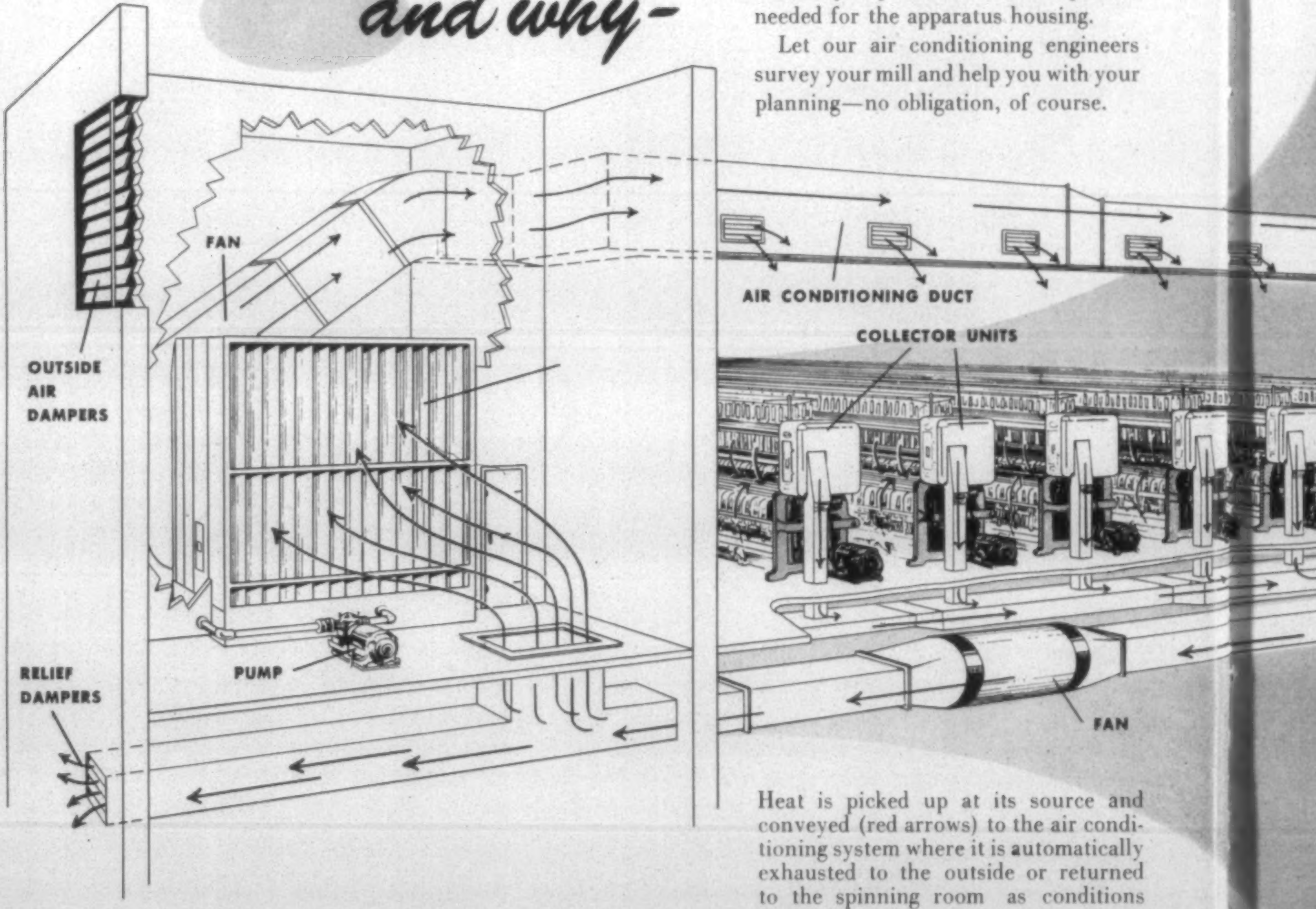
and why-

WHETHER your future air conditioning system is of the Dry Duct, Central Evaporative Cooling, or Refrigeration type, Pneumafil C.A.H. will drastically cut your air conditioning investment and reduce its yearly operating cost.

And that's not all!—In addition to these savings, only the Pneumafil C.A.H. system can give you ideal temperature and humidity control that is so vital in the operation of today's modern spinning room.

When your air conditioning and Pneumafil C.A.H. are designed together, you buy smaller ducts, smaller fans, smaller motors, smaller air washers, smaller pumps, and a smaller space is needed for the apparatus housing.

Let our air conditioning engineers survey your mill and help you with your planning—no obligation, of course.



Heat is picked up at its source and conveyed (red arrows) to the air conditioning system where it is automatically exhausted to the outside or returned to the spinning room as conditions demand.

We are currently converting Pneumafil Unit System (individual motor and fan on each frame) to Pneumafil C.A.H. If you now have unit type, you should consider this conversion.

PNEUMAFIL CORPORATION

CHARLOTTE 8, NORTH CAROLINA
Sales Offices:
Atlanta, Ga.
Needham Heights, Mass.

PNEUMAFIL®

*Patented

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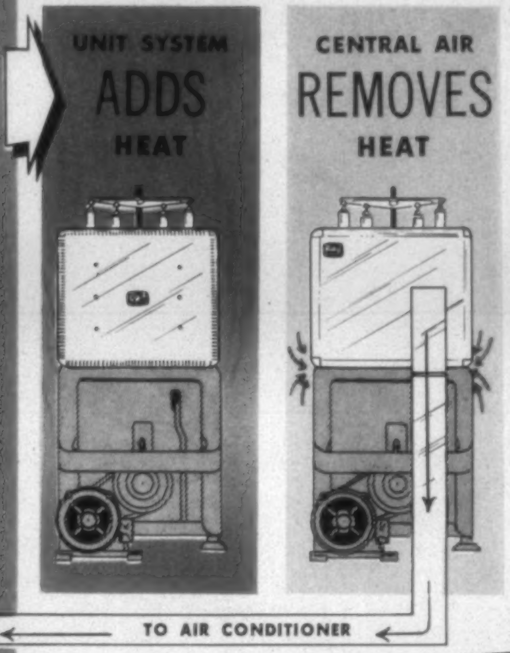
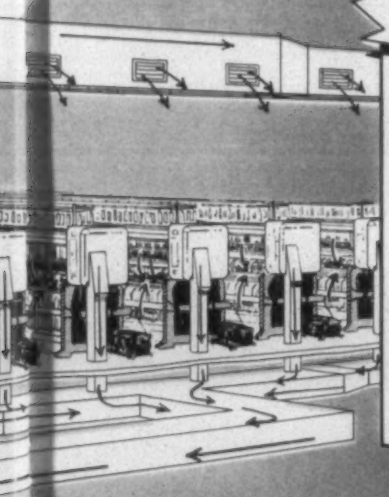
HERE'S WHY YOU SAVE MONEY WITH PNEUMAFIL C.A.H.

(CENTRAL AIR HANDLING)



THIS IS HOW MUCH MONEY YOU SAVE ON YOUR AIR CONDITIONING . . .



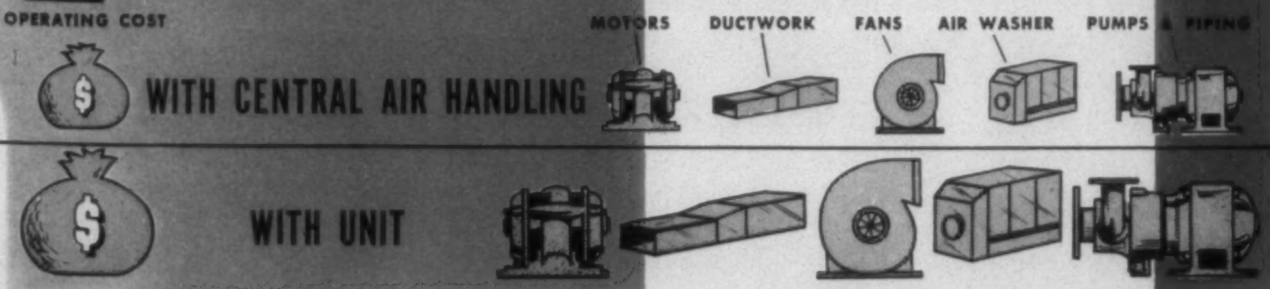
FIGURES REPRESENT DOLLAR SAVINGS		HORSEPOWER PER SPINNING FRAME				
		5 hp	7.5 hp	10 hp	15 hp	20 hp
WHEN YOU BUY IT	DRY DUCT SYSTEM	9,600	11,700	13,650	17,250	21,300
	CEN. EVAP. COOLING	12,800	15,600	18,200	23,000	28,400
WHEN YOU OPERATE IT FOR 10 YEARS	DRY DUCT SYSTEM	3,420	4,164	4,680	6,200	7,600
	CEN. EVAP. COOLING	5,392	6,560	7,360	9,800	12,000
TOTAL	DRY DUCT SYSTEM	13,020	15,864	18,330	23,450	28,900
	CEN. EVAP. COOLING	18,192	22,160	25,560	32,800	40,400

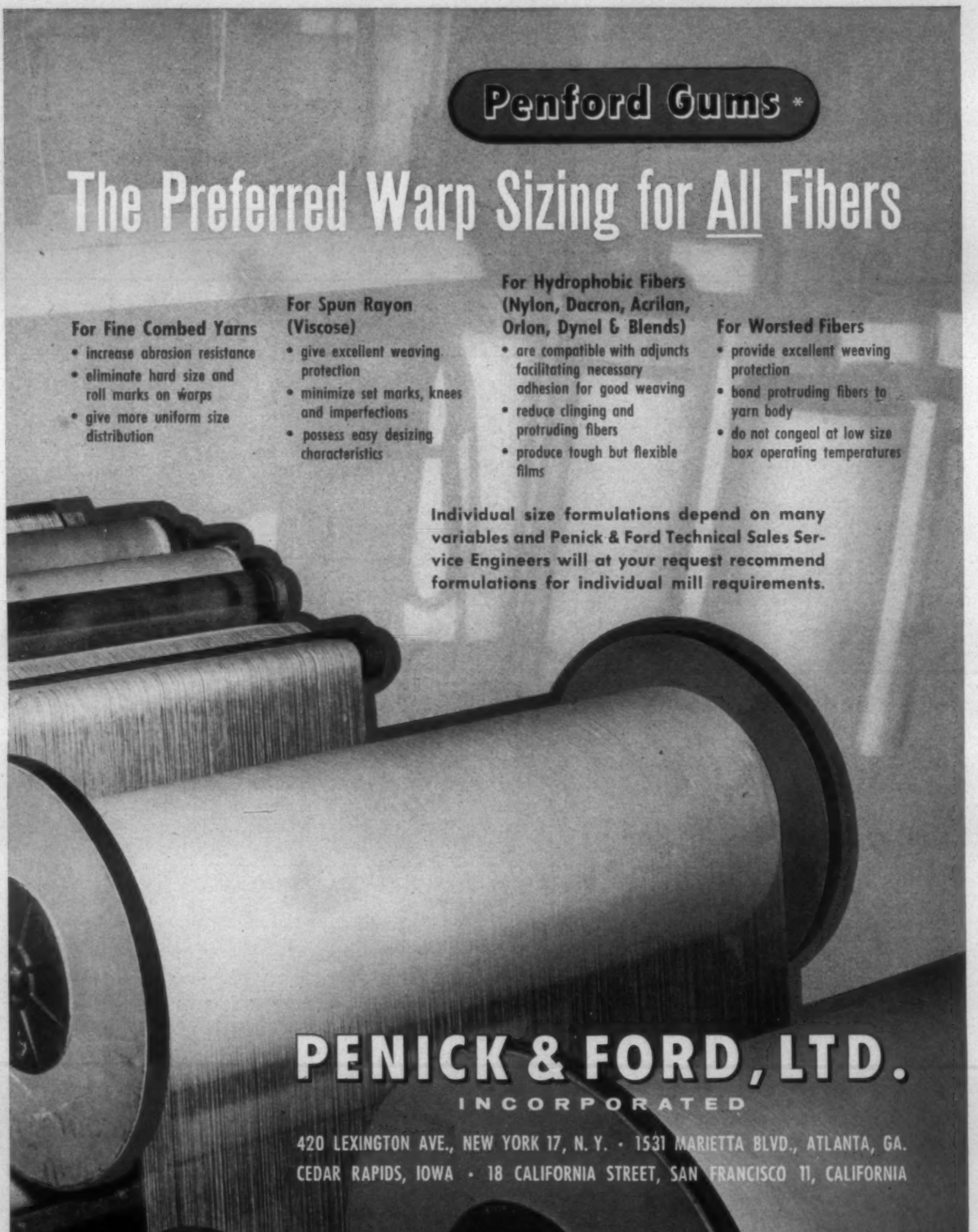
BASED ON 100 FRAME SPINNING ROOM

REFRIGERATION TYPE SYSTEM

Refrigeration savings (not shown on chart) are even greater than those above. These savings are so variable, an average would be misleading.

HERE'S WHERE YOU SAVE MONEY





Penford Gums *

The Preferred Warp Sizing for All Fibers

For Fine Combed Yarns

- increase abrasion resistance
- eliminate hard size and roll marks on warps
- give more uniform size distribution

For Spun Rayon (Viscose)

- give excellent weaving protection
- minimize set marks, knees and imperfections
- possess easy desizing characteristics

For Hydrophobic Fibers (Nylon, Dacron, Acrilan, Orlon, Dynel & Blends)

- are compatible with adjuncts facilitating necessary adhesion for good weaving
- reduce clinging and protruding fibers
- produce tough but flexible films

For Worsted Fibers

- provide excellent weaving protection
- bond protruding fibers to yarn body
- do not congeal at low size box operating temperatures

Individual size formulations depend on many variables and Penick & Ford Technical Sales Service Engineers will at your request recommend formulations for individual mill requirements.

PENICK & FORD, LTD.

INCORPORATED

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* (U. S. PATENT NOS. 2,516,632; 2,516,633; 2,516,634)

Manufacturers of Card Clothing since 1866

Tuffer TRADE MARK **HOWARD BROS.** T2

WORCESTER 8, MASSACHUSETTS
Southern Plants: Atlanta, Ga., and Gastonia, N. C.
Direct Representation in Canada

TUFFER PRODUCTS Card Clothing for Woolen, Worsted, Cotton, Asbestos and Silk Cards • Napper Clothing and Brushes • Top Flats re-covered and extra sets loaned at all Plants • Lickerins rewired at Southern Plants • Hand Stripping Cards

Motor alley in Spinning Room showing installation of Bahnson Central Heat Removal System.

Why our new Central Heat Removal System **takes out more** unwanted spinning room heat than other designs

Based on the net heat added to a spinning room in the motor alley and by vacuum collection equipment, comparative field tests conducted with mill engineers show that the Bahnson Central Heat Removal System takes out *approximately twice the unwanted heat* removed by other designs.

This is possible because our Central Heat Removal System simultaneously:

- Cools the motor alley by efficiently removing the heat generated by the frame motors.
- Removes the heat from the vacuum collection units.

Result: It provides more uniform conditions in the spinning room. It also retains the flexibility and convenience of the unit system.

If you are interested in performance and technical data on our Central Heat Removal System, or in having our representative call to discuss your heat problem, write directly to me at the Bahnson Company or simply mail the coupon below.

Agnew Bahnson Jr.
President
The Bahnson Company

Agnew H. Bahnson, Jr.
Dept. R
The Bahnson Company
Winston-Salem, N. C.

We are interested in ☐ data on the Central Heat Removal System ☐ having your representative call to discuss our heat problems.

Name____________________

Company____________________

Position____________________

Address____________________

City__________ Zone____ State________

Bahnson
COMPANY
WINSTON-SALEM, N. C.

AIR CONDITIONING
VACUUM COLLECTION
CLEANING
CREELS

Clinton®

starches keep production

"ON COURSE"

For smooth sailing in the weave-room, use Clinton starches on every warp-sizing job. They're easily prepared and applied — maintain proper consistency through a wide temperature range. By reducing friction and increasing warp strength, Clinton starches step up weaving efficiency — help keep production runs on schedule.

The finishing operation, too, calls for Clinton's consistently high quality. Clinton has what it takes to give your textiles the "hand" and body that sells. In every mill operation calling for a quality starch product, it pays to set your course with Clinton.

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technical service in connection
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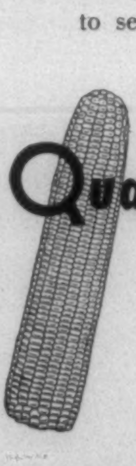

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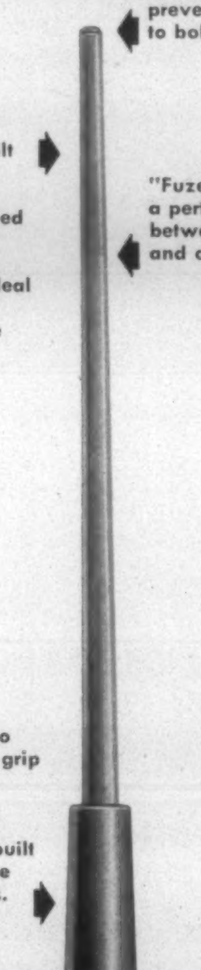
Our 50th Anniversary Year 1907 - 1957



Tips are rounded to prevent damage to bobbins.

Worn tops rebuilt by exclusive "Specialloy" process, hardened and reground. Or new tops added by the Ideal "Fuze-Weld" process. Can be lengthened to produce larger packages.

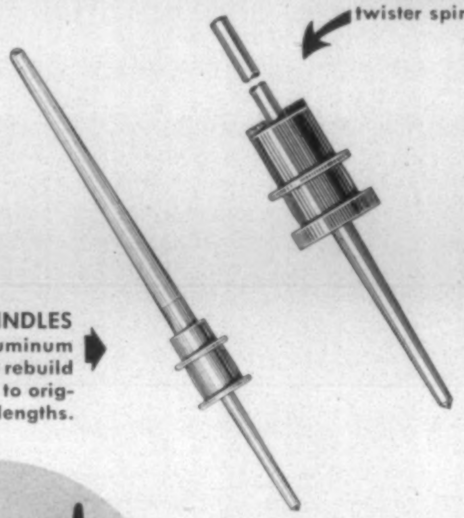
"Fuze-Weld" forms a perfect bond between new top and old blade.

Acorns rebuilt to assure positive grip and fit, and uniform height of bobbins. Can also be rebuilt to accommodate larger packages.

Worn bearing surfaces rebuilt with tough, oil-retaining "Specialloy": prevents running dry and gives longer wear.

Whorls rebuilt or resized to produce uniform twist and count.

Points precision finished ground to the correct degree of taper.



New drive lugs installed on twister spindles.

ADAPTOR SPINDLES
Ideal puts on aluminum adaptors and can rebuild bottom of blades to original or to new lengths.

Ideal is headquarters for spindle savings

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Ideal *rebuilds* (not just regrinds or repairs) your worn spindles. Ideal rebuilt spindles give you new spindle efficiency and length of service at very substantial savings. All work is done to precision tolerances.

Three Services	**Rebuilt to original specifications.**
	Rebuilt to produce larger packages.
	New spindles of all types, manufactured to specifications.

If your bobbins vibrate or weave, or are not all at the same height, they are causing poor lay and are wearing out bolsters and bobbins. Let an Ideal technical representative survey your frames and give you a price on your work without obligation.

Ideal Machine Shops, Inc.

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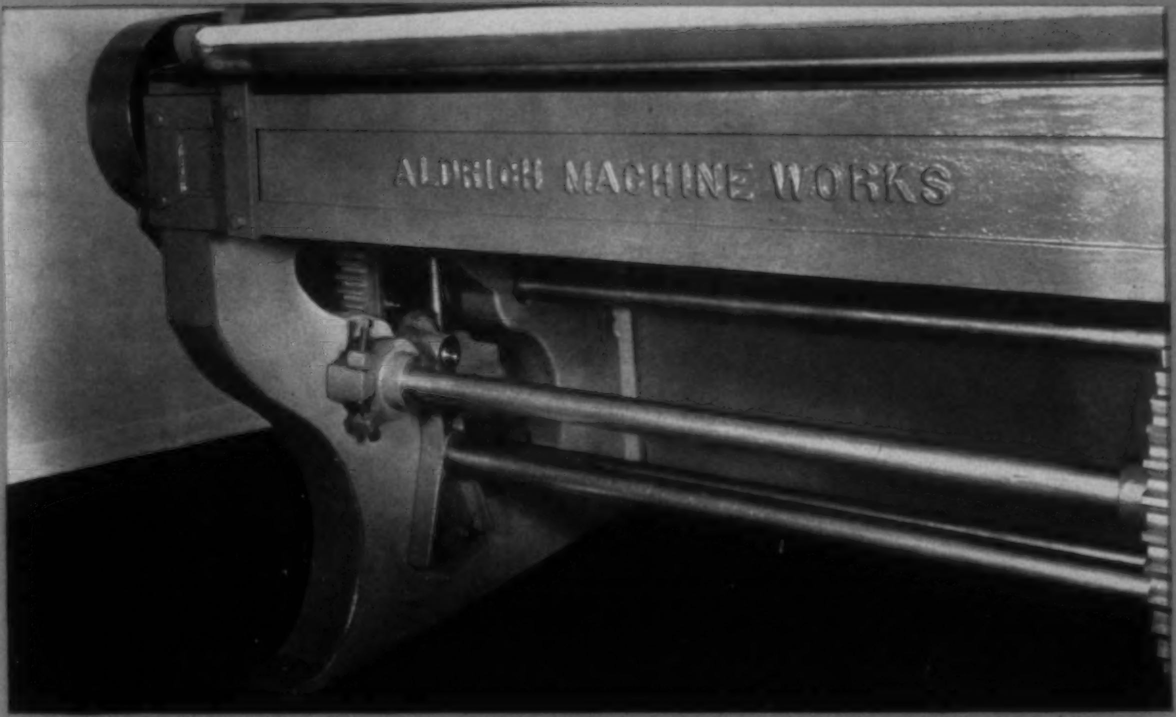
Need *New Pickers?*

. . . then, think of what you get in **ALDRICH PICKERS!**



★ As long as there have been pickers, there has been trouble with the shoes that hold the calender rack gears in mesh with their spur gears on the cross-shaft.

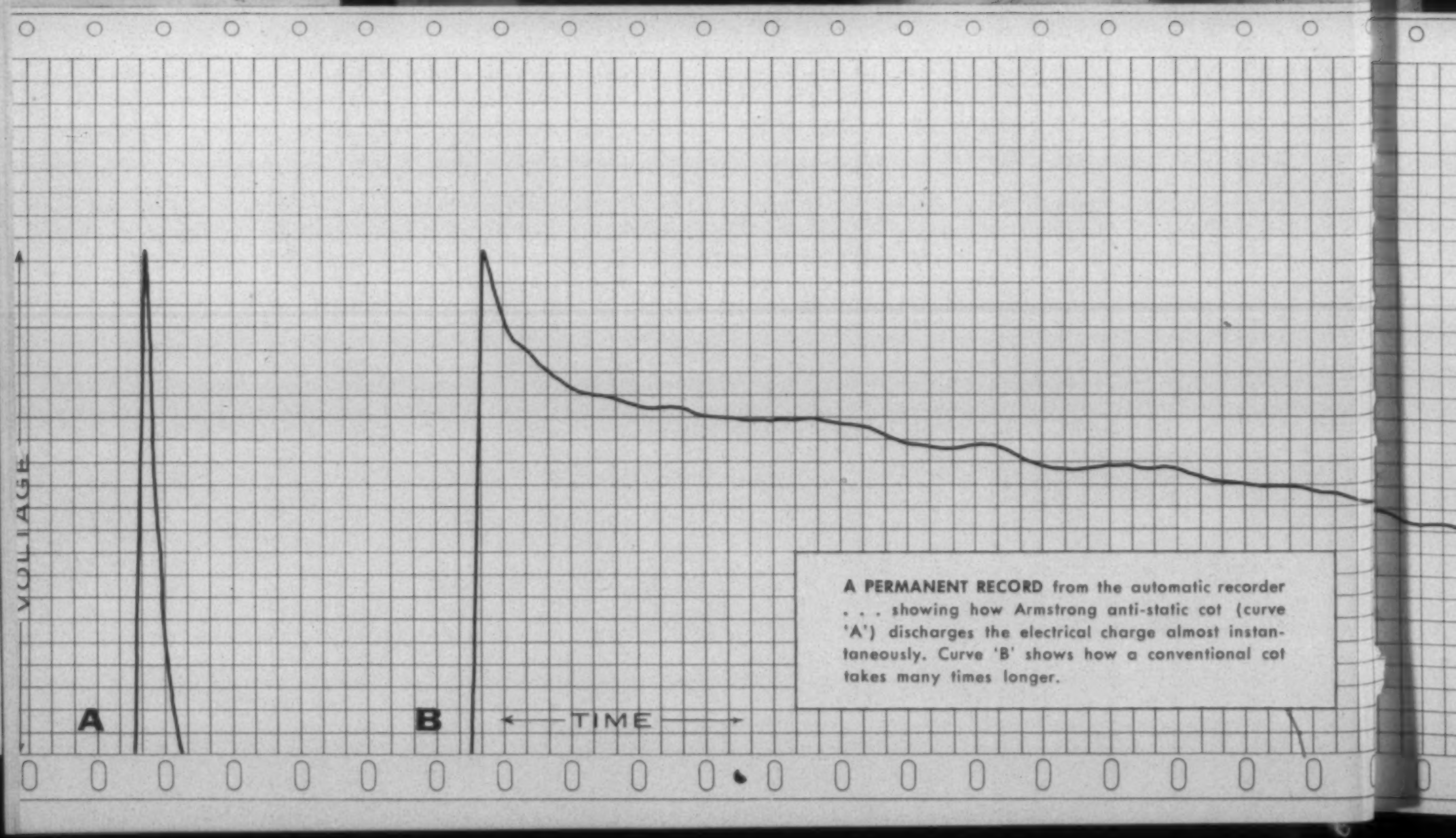
These shoes are not on the Aldrich calender. The roller, pictured above, running on an Oilite bushing and attached to a mounting pivoted on a stationary shaft in the calender, holds the calender rack gear exactly in place without any possibility of binding or jamming.

Furthermore, to make sure that the cross-shaft can't stick in a dry bearing, this shaft is mounted on ball bearings, which are permanently lubricated.

This is one of the many improvements in the Aldrich picker which eliminate trouble and help to make better laps.

AldricH MachinE WorkS
Greenwood, South Carolina

Here's proof that n



A PERMANENT RECORD from the automatic recorder . . . showing how Armstrong anti-static cot (curve 'A') discharges the electrical charge almost instantaneously. Curve 'B' shows how a conventional cot takes many times longer.

AN ELECTRICAL CHARGE is stored in a condenser by connecting its terminals briefly to a six-volt battery. The cot is placed on needle-point contacts to which the condenser is wired . . . providing a path for the electricity. A sensitive recorder automatically records the rate of discharge.

new Armstrong anti-static cots help

PREVENT LAPPING, REDUCE WASTE

If you are having trouble with front roll laps and excessive clearer waste caused by static, you'll be interested in the dramatic laboratory test shown here.

This test measures the rate at which the new Armstrong anti-static cots carry off an electrical charge. It has been proved that this accurately indicates the ability of the cots to discharge static electricity.

As mill men know, static is becoming an increasingly serious problem. The reason is the growing use of synthetic yarns, the trend toward non-metallic cap bars, and the elimination of other metal-to-metal contacts in modern frames.

Armstrong anti-static cots help to eliminate lapping conditions caused by static because they contain certain ingredients which enable the cot to carry off static charges continuously. This prevents such charges from accumulating on the yarn or cots to the point where they can cause trouble.

Extensive mill installations of these new compounds indicate that they practically eliminate lapping caused by static. In many cases, they also significantly reduce waste.

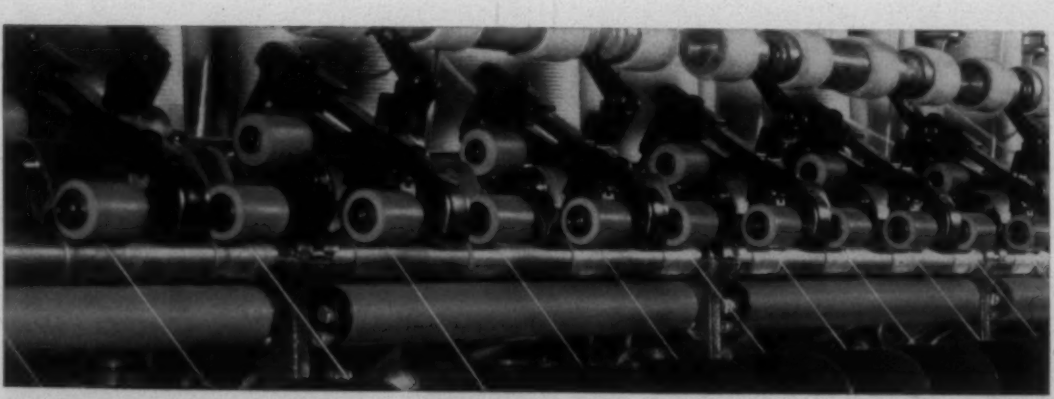
Like all Armstrong Accotex® Cots, these new roll coverings will give years of service. Rebuffing (rarely necessary more than once a year) doesn't impair their built-in anti-static properties.

Together with Accotex J-490 Cots, the new Armstrong anti-static materials form a complete group of cots which will control lapping on spinning and cardroom frames. Where high static aggravates the lapping problem, these two new compounds are recommended: Accotex NC-762 for frames with flat clearers and Accotex NO-764 for frames equipped with revolving clearers.

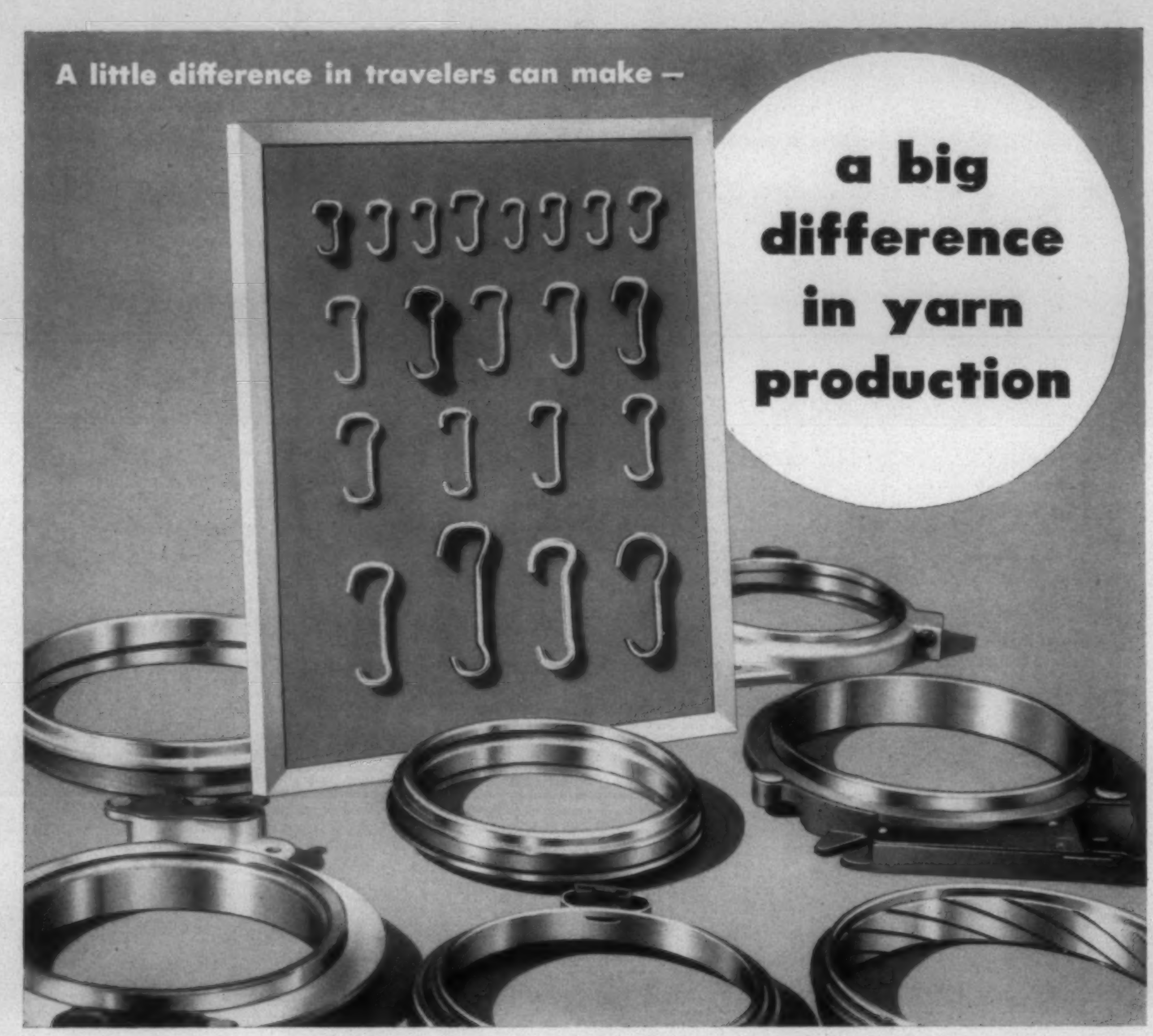
Be sure to write for more information on these anti-static cots. Address Armstrong Cork Company, Industrial Division, 6502 Davis Avenue, Lancaster, Pennsylvania.

Armstrong ACCOTEX COTS

. . . used wherever performance counts



NOT A LAP-UP IN SIGHT . . . on this modern frame equipped with Armstrong anti-static cots. Even when spinning synthetic fibers, these specially compounded cots carry off the static electricity before it can create a lapping problem. In many cases, these cots also help reduce waste.


A little difference in travelers can make —
a big difference in yarn production

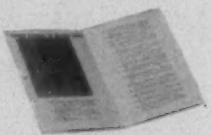
THE DIFFERENCE between various styles of travelers made for lubricated vertical rings, may be hard to see at a glance. But it's a very important difference.

Unless the traveler design is exactly right for the ring, much of the advantage of lubrication will be lost. Also, unless the design is exactly right for the yarn being processed, ends-down will cut production, and quality will suffer.

Whether you are running novelties like boucles, poodles, or seed yarns, — or twisting the heavier stocks normally processed on lubricated rings, Victor has the right vertical travelers to keep your production trouble-free.

You'll find it well worthwhile to check over your operations with a Victor Service Engineer. He can often show you that "headaches" you've taken for granted can be readily cured. Write, wire, or phone the nearest Victor office.

VICTOR VERTICAL TRAVELERS
representative of the styles commonly used on lubricated rings are described in this folder, with useful information on selection. Ask for Form VTN.



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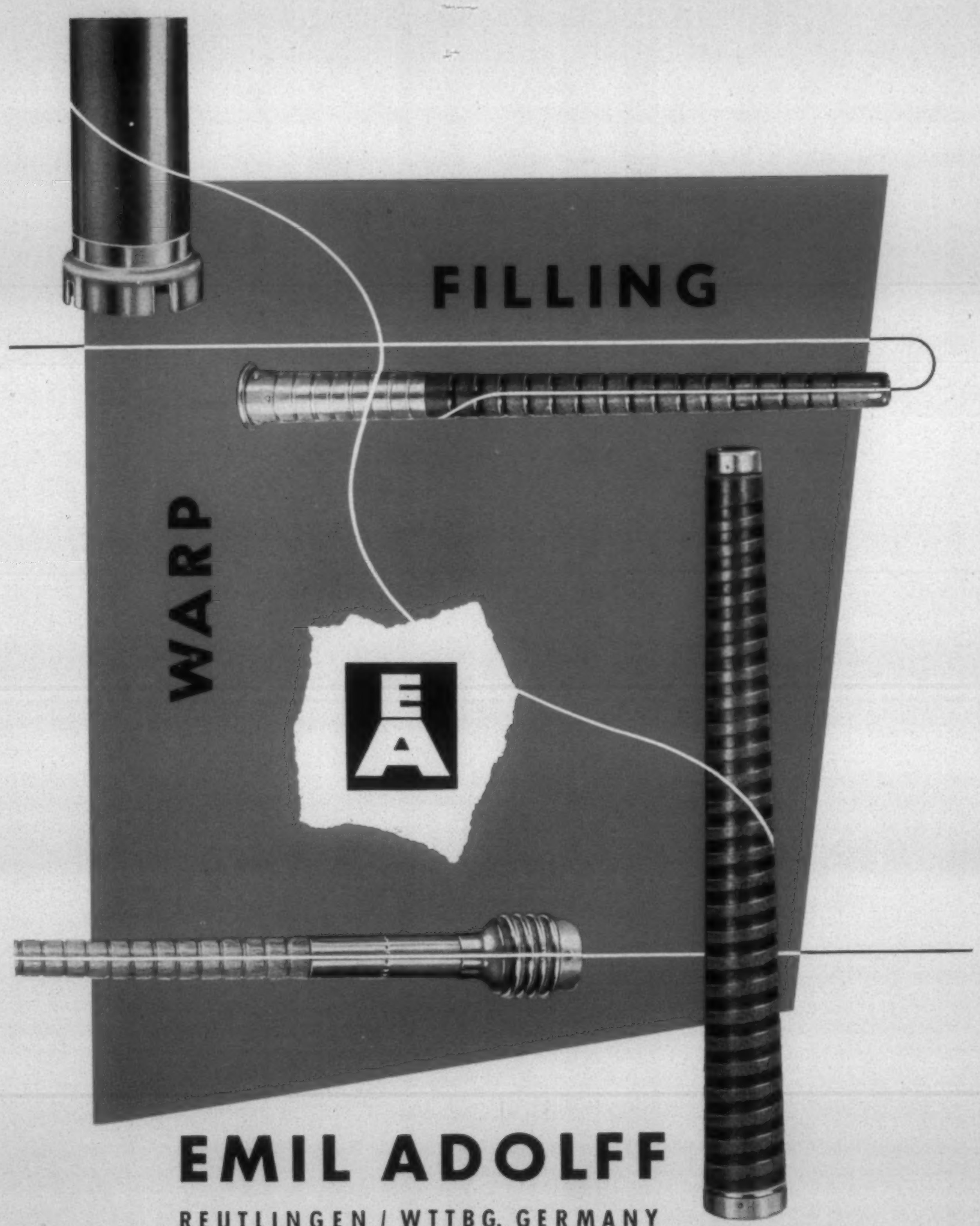

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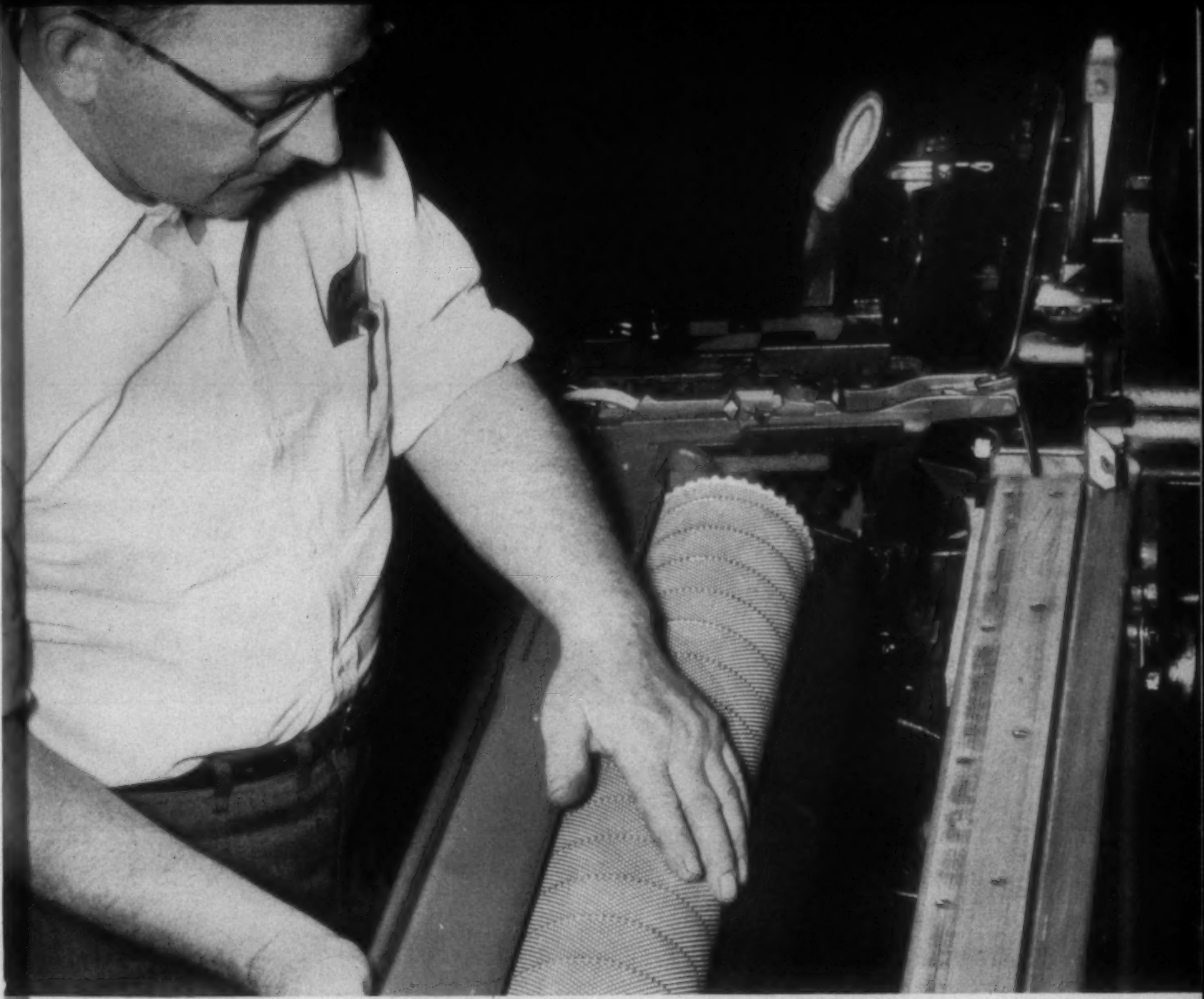
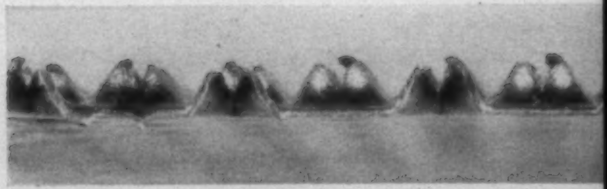


IMPROVED TAKE-UP ROLL COVERING REDUCES SECONDS

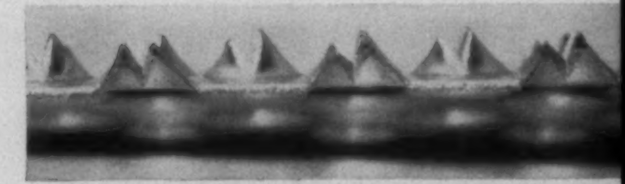
A new manufacturing method perfected by Draper Corporation now makes it possible to produce *a steel fillet covering which has uniform perforations.*

The Draper steel fillet take-up roll covering eliminates "hooks" or irregularities commonly found in fillet coverings. In addition, cloth is held firmly without the danger of cutting or tearing fibers.

This steel fillet is currently available in three grades; *extra-fine*, *fine* and *medium*.



UNRETOUCHED PHOTO showing "hooks" on old style fillet covering which cut or tear cloth fibers.



ACTUAL PHOTO of new Draper steel fillet covering, illustrating uniformity of perforations which reduce cloth seconds.

DRAPER CORPORATION
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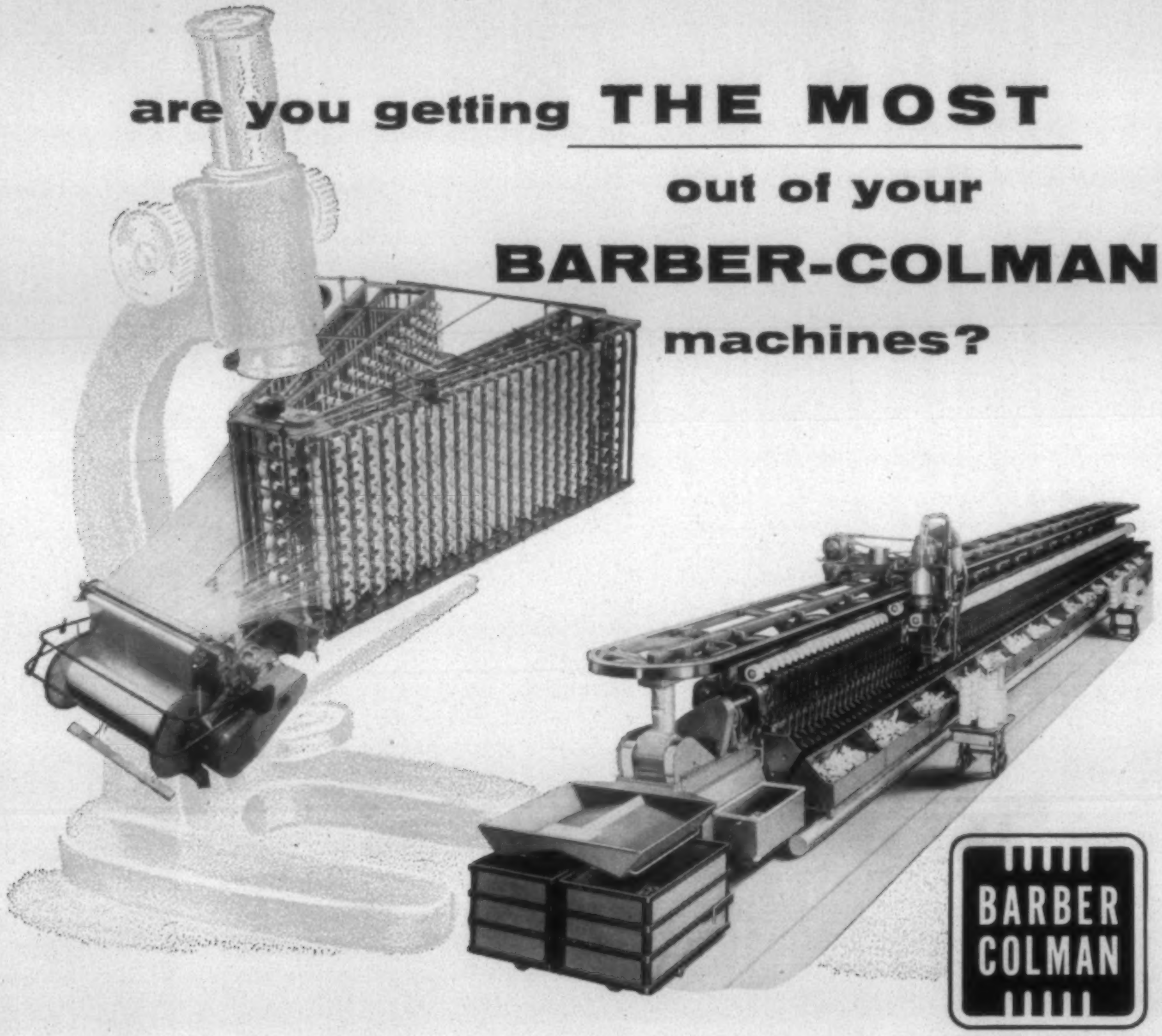
are you getting THE MOST out of your BARBER-COLMAN machines?



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Any time is a good time to take a close look at your Barber-Colman Automatic Spoolers, Super-Speed Warpers, Warp Drawing Machines, and Warp Tying Machines—to see if they are continuing to deliver their original high performance. You have a substantial investment in these machines, and you are entitled to a continuing return on that investment. It would be a good idea to be sure that nothing in the *performance* of the machines is keeping you from getting that return.

MAY WE HELP YOU?

Our Service Department people are available to assist you in determining the operating condition of your machines and to indicate what, if anything, might be needed to put them at their peak of efficiency. The men who do this work are thoroughly experienced on all Barber-Colman machines. If you are interested in taking advantage of this service, just get in touch with your regular Barber-Colman representative, or write direct to the main plant.

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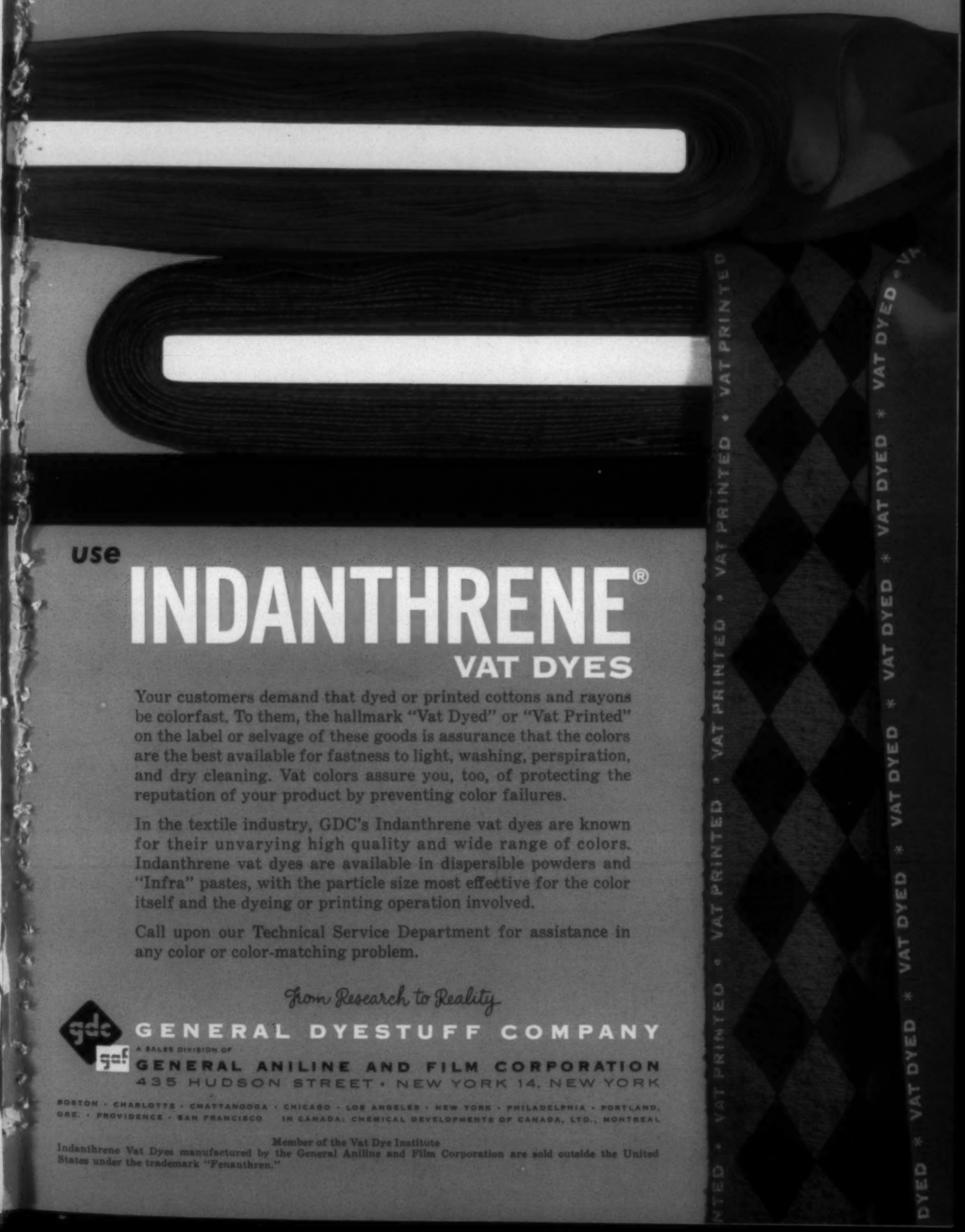
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WATCHING WASHINGTON

[Exclusive and Timely News from the Nation's Capital]

Economy in spending, or reduction in taxes, are not among the prophesies in sight for this session of Congress, or evident in the executive program. Spending may be at the highest in any peace year. Levies on business and enterprise will move upward, at least in volume of taxes paid. Overseas spending will not fall below $5 billion, and military spending will again reach for $40 billion. The hourly minimum wage may go to $1.25; welfare aid will be set at a new level, and governmental costs in every department will be higher next year than they are this year, or were last year.

Twenty-eight House Democrats, all from Northern or Western states, jumped the gun on the President and their party leaders in a legislative program of their own. They call for enactment of a host of measures, including low bracket tax cuts, school construction aid, civil rights, no cuts in armed forces, a higher minimum wage, and continuance of "adequate" foreign aid. Neither Speaker Rayburn or House members from the South were consulted. Republican House members are being urged to join in the program.

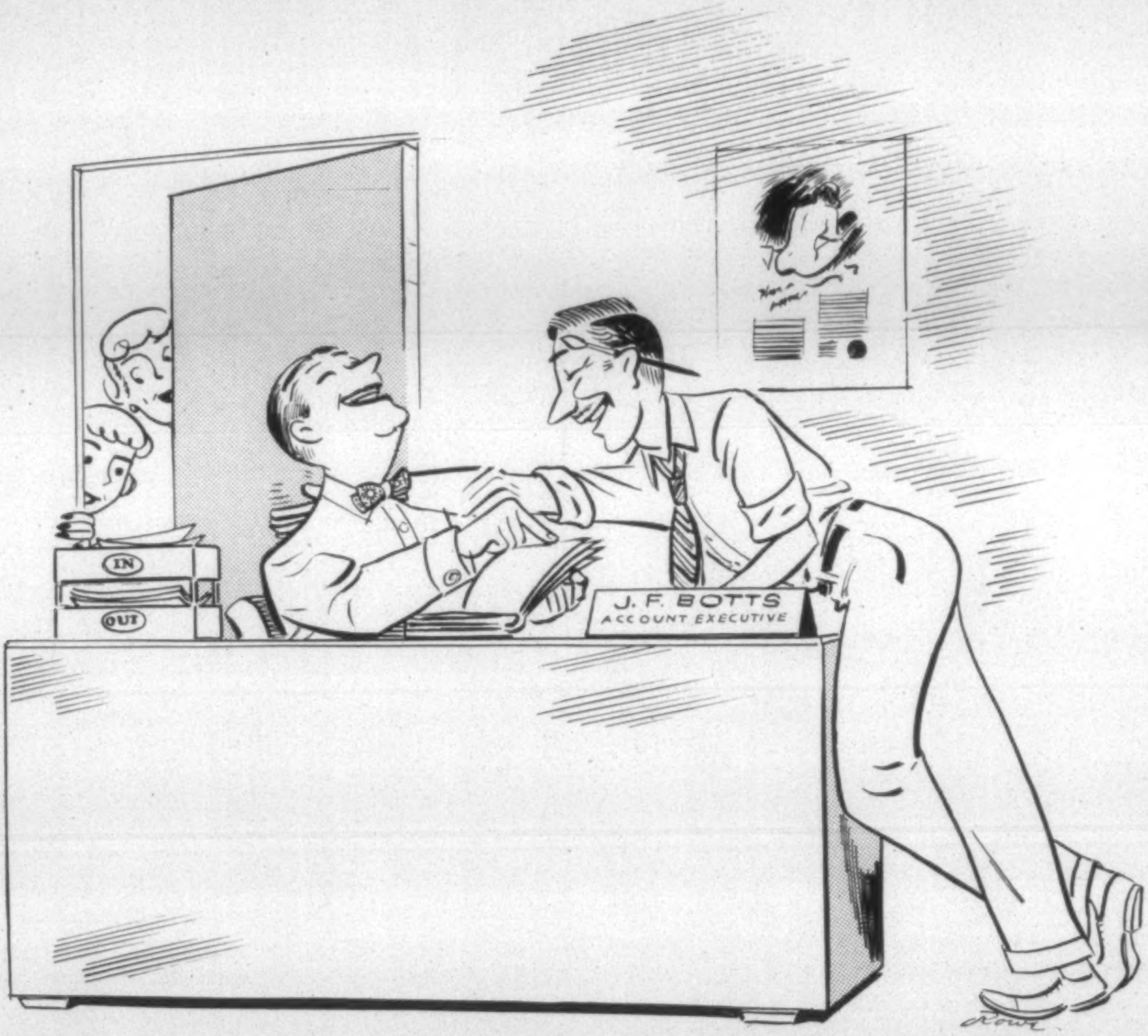
Democrats are uneasy over their margin of one in control of the Senate, and face upheaval in the loss of one member. Republican Leader Knowland has served notice he will move for the Republicans to take over at any time they have a majority of one, as they would have with the Vice-President as presiding officer. The President has made known he is "fed up with Democratic-controlled committees nibbling away at Administration programs," especially in foreign affairs and economic aid.

The Senate is involved in another long battle to change its rules as a prelude to attempting to pass civil rights bills. These battles have come up periodically for 20 years, and generally leave senators so exhausted physically that little else is achieved in a session. The closure rule was first set up in 1921, and slightly changed in 1949, but it has been successfully invoked only four times in 22 attempts. The Senate jealously adheres to its right to free and unlimited debate.

Far more is involved in the rules change proposal, said Senator Russell (D., Ga.), than a question of stopping filibusters or passing civil rights bills. The real issue, he said, is in imposing a new restriction on constitutional rights, and distorting constitutional provisions. Some efforts for change, he said, have become "almost a conspiracy of intimidation." For 167 years, he said, the Senate has adhered to the precedent of considering itself a continuing body.

Senator Jenner (R., Ind.) told the Senate the real aim of the proposed change in rules is not only for civil rights bills, but for all kindred legislation to come. He said it is historical strategy to raise a moral issue, relate it to a desired goal, and wage a campaign almost solely on the moral issue. The real goal and intent is obscured, he said, and even if civil rights were passed, other so-called "liberal" bills would follow soon.

Civil rights is "a convenient tool" that is being used by many groups to achieve a desired end, Senator Jenner said. Majority control in the Senate, he said, puts a minority at the mercy of the other group, and opens the door to



"They must have selected DILLARD paper . . . they *never* agree on anything else!"

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1926 "IF IT'S PAPER" 1957

majority bossism. Legislative independence disappears, for cloture is the foundation of machine rule. With it, he added, one or two bosses may attain supremacy in the Senate's functioning, and doors may be opened to outside manipulation.

Twelve civil rights bills, covering terms of all similar bills in a dozen years, were introduced in the first five days of this session. They cover the President's program, including setting up a new enforcement division in the Department of Justice. They would forbid "discrimination" in employment and transportation, levying poll taxes, and providing for court action on them.

Speaker Rayburn refused emphatically to join, or to recognize, an outside advisory committee to Congress proposed by Democratic Chairman Butler. The proposal initially came from A.D.A., and from proponents of civil rights and other "liberal" legislation. The committee was intended to add its voice to the legislative processes. Mr. Rayburn said the House always welcomes suggestions, and testimony before committees, but outside groups cannot be accepted as a part of the functioning of the House.

Tension, and even friction, exists in Congress in exceptional degree, with blocks organized to push through favored legislative programs. Struggles are multiplying for power and control, and parties are split down the middle. Democrats are divided on old issues, although for the moment in control of both branches. Various groups are proposing far-reaching investigations into government and into business. The President's program is faced with partisan collisions, and some sweeping changes.

Cancellation of automatic cuts scheduled for April 1 in corporate taxes has been agreed to by the President and Republican leaders in Congress. Revenue involved is about $3 billion. The drop to 25 per cent in levies on the first $25,000 in earnings, and 47 per cent on other earnings, and excises on liquor, cigarettes and automobiles will be postponed for at least a year. Present corporate rates are 30 per cent and 52 per cent, respectively.

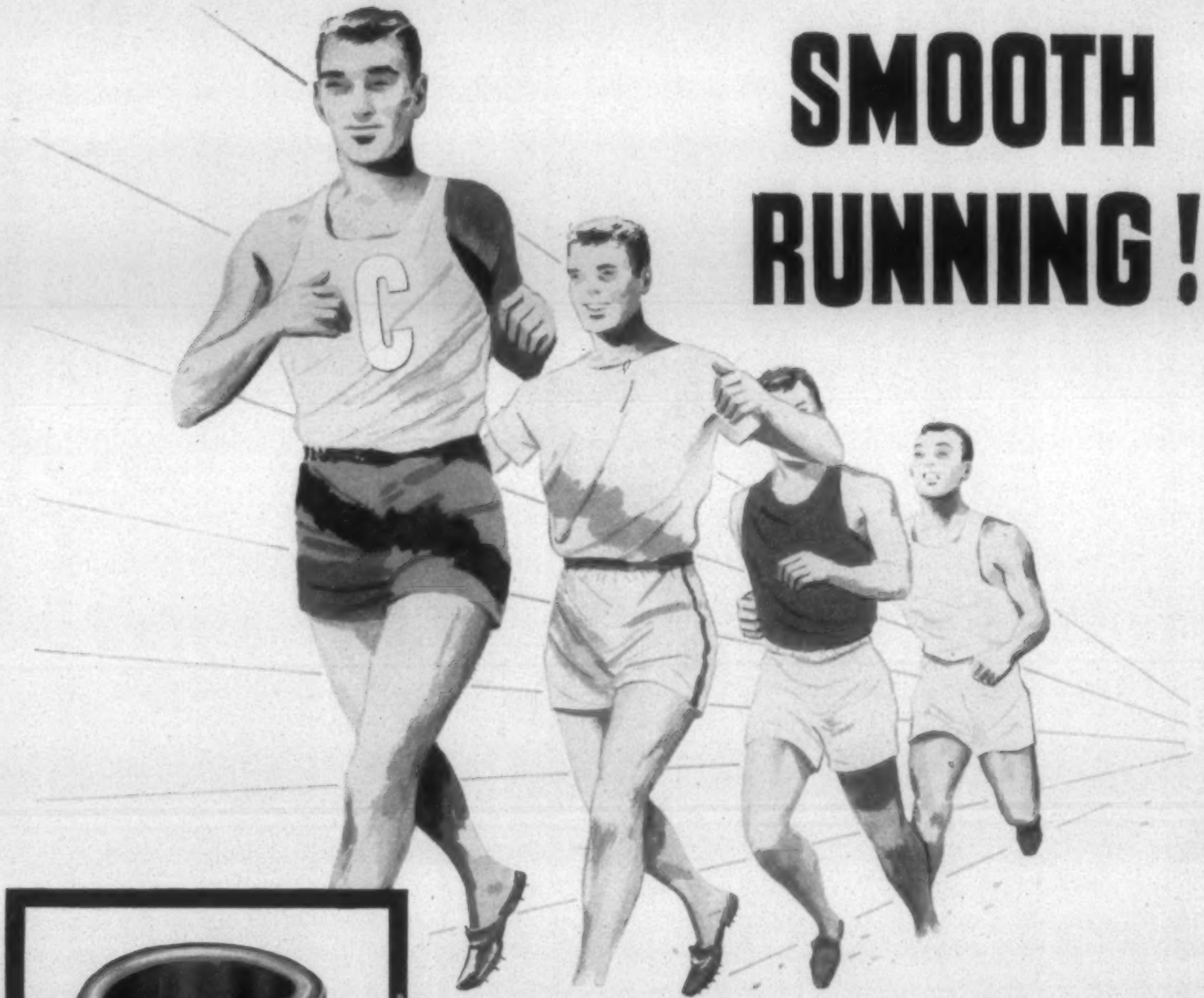
Highest on record grants to finance expanded Federal welfare programs next year, exceeding more than $3 billion, is being asked by the Administration. Much of the increase of $500 million is for health and educational aid. Public assistance grants would be increased by $50 million. The estimate for school construction aid, which is being urged again on Congress, is $451 million.

About 14 million workers are now under some form of private pension plan, of which there are about 23,000, the Treasury reports. Benefits are being better defined, the Treasury said, and new bases for payments prescribed. The tendency, the Treasury said, is toward increasing flat payments per year of service, and eliminating Social Security offsets. Vested rights in the pension plans are being made more certain. However, new laws assuring security of pension funds have not been enacted.

Industry and employers are paying mountainous costs for restrictive practices of unions, the U. S. Chamber of Commerce finds. The exact figure is only a remote guess, but includes scores of types of jurisdictional claims, "feather-bedding" and made work, stand-by employees, and growing fringe benefits. Labor is only about 60 per cent as efficient as before the war, but wages in some areas have more than tripled.

Compulsion in joining the structure of organized labor is growing under efforts of the A.F.L.-C.I.O. to unionize "fringe" workers. The "fringes" are largely among white collar workers, and in areas closely related to governmental service. Efforts to defeat or offset state right-to-work laws, with repeal of the authorizing provision of the Taft-Hartley Law, are at a new level. Union emissaries are concentrating on state legislatures, in addition to pressing in Congress for repeal.

SMOOTH RUNNING!



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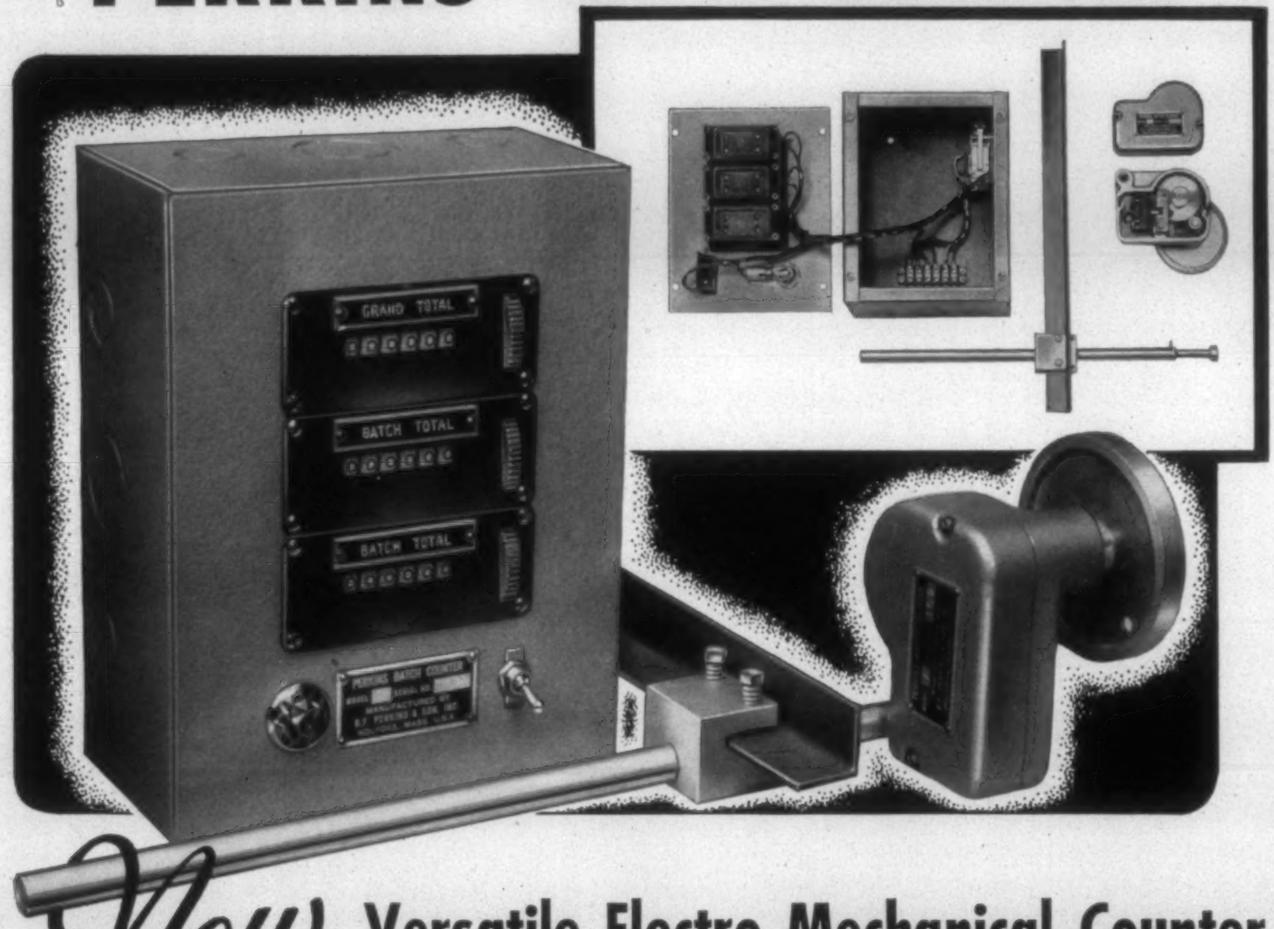

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Use it on your automatic winders. It registers the exact total yards in each batch and retains the total until the operator can record it. Each batch is measured from its exact beginning to its exact end. The total production for a day or shift is also registered. Use it for counting the pieces going into lots where the weight or the size of a container limits the lots. The action that separates the lots also separates the count. Each lot total is retained while the next lot is being counted. This versatile batch counter will count any kind of material, being separated into lots or batches, by an electric impulse.

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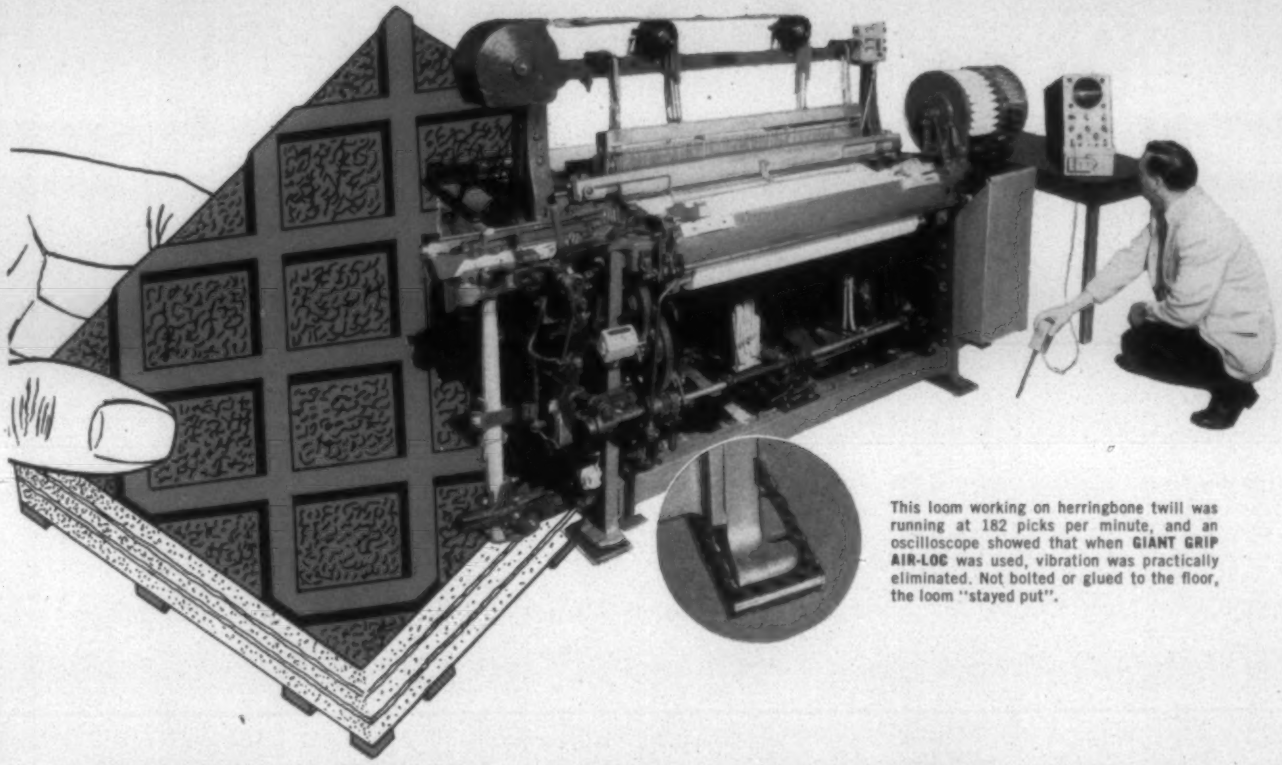

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5. Turns *vertical* loom movement into *horizontal* movement and practically eliminates the vibration that can cause downtime.

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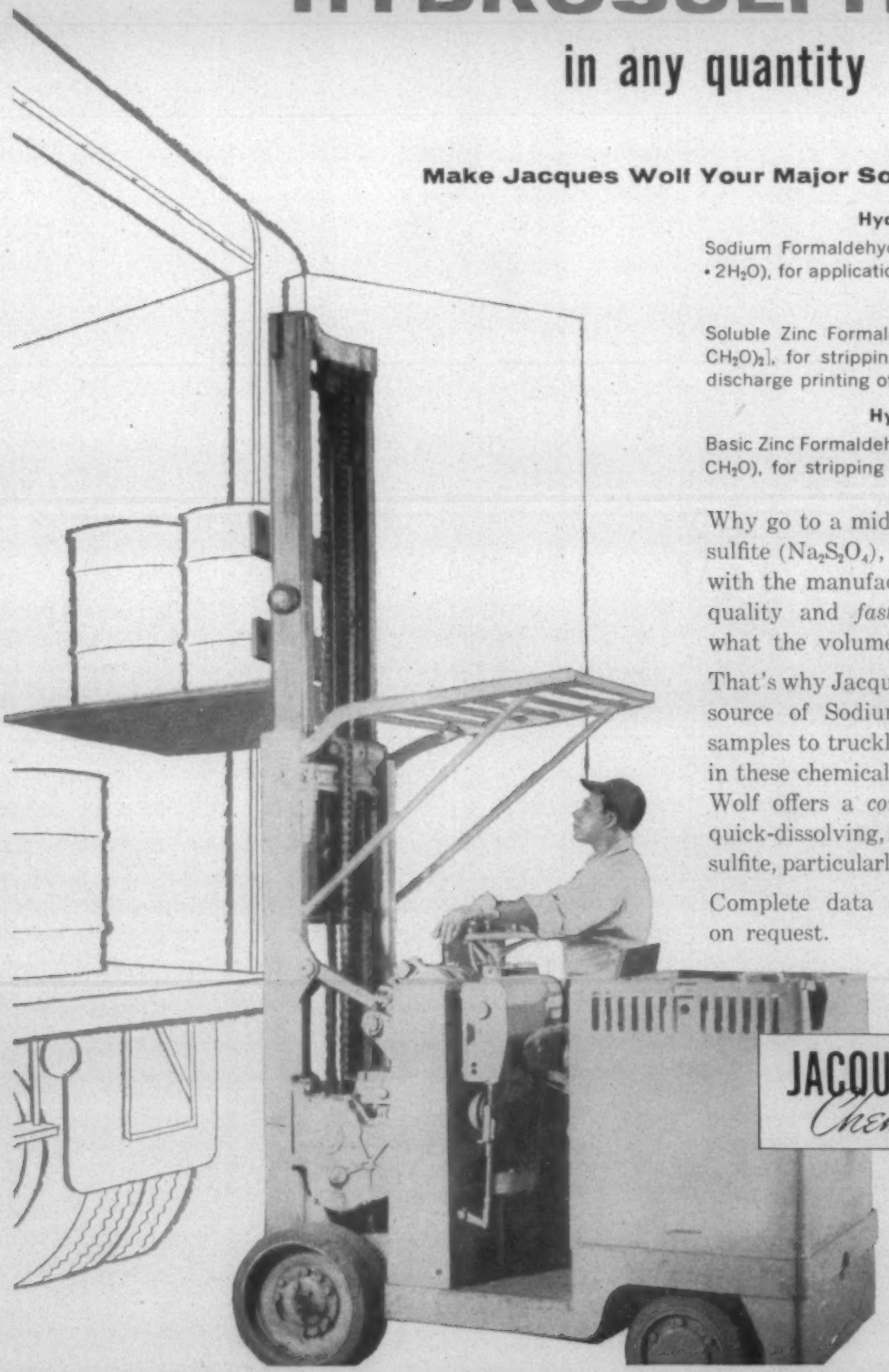

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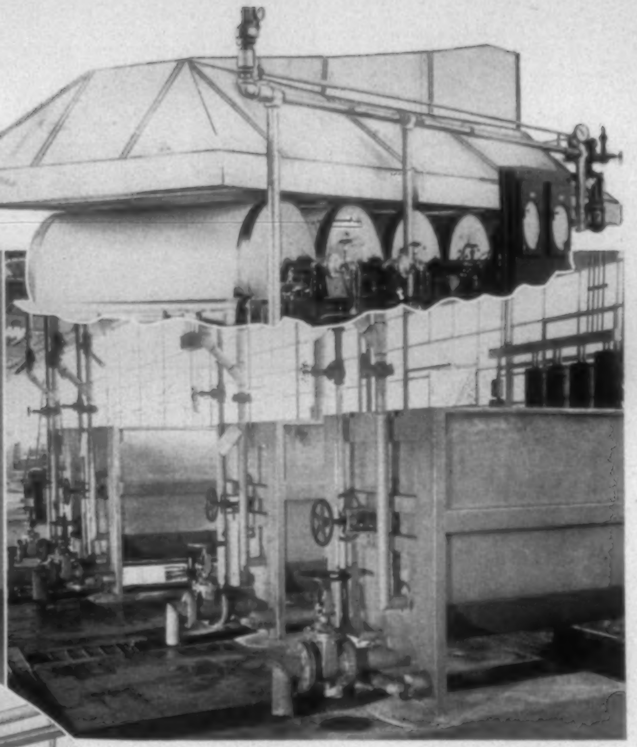

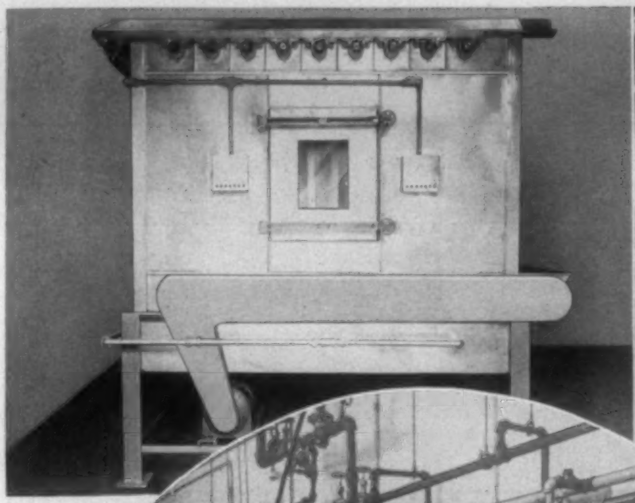

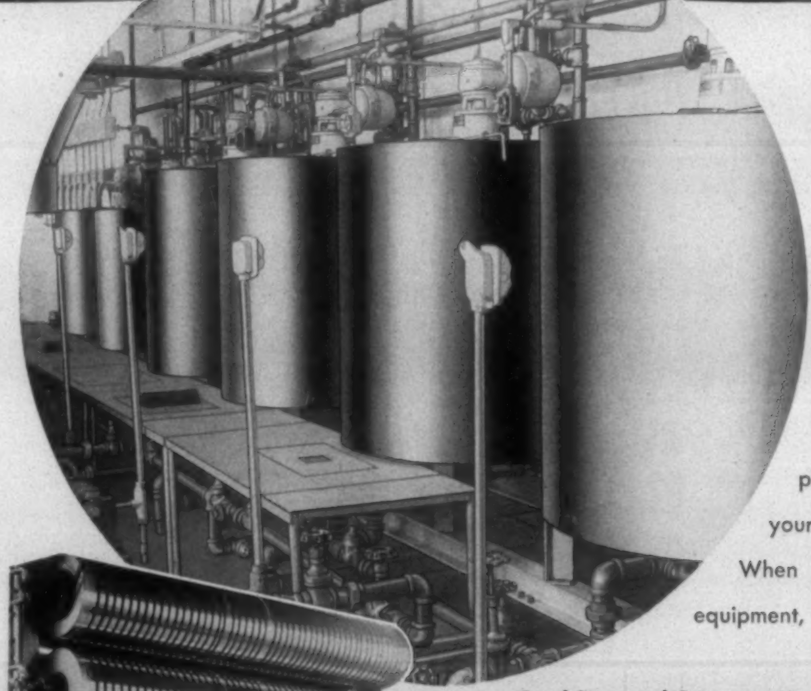

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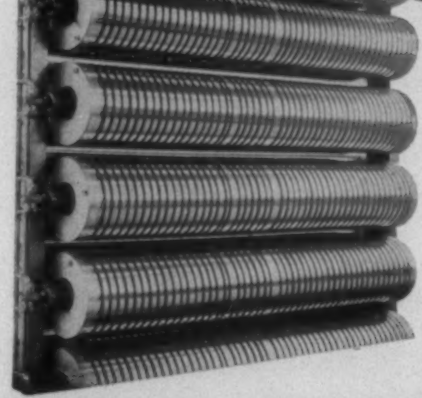

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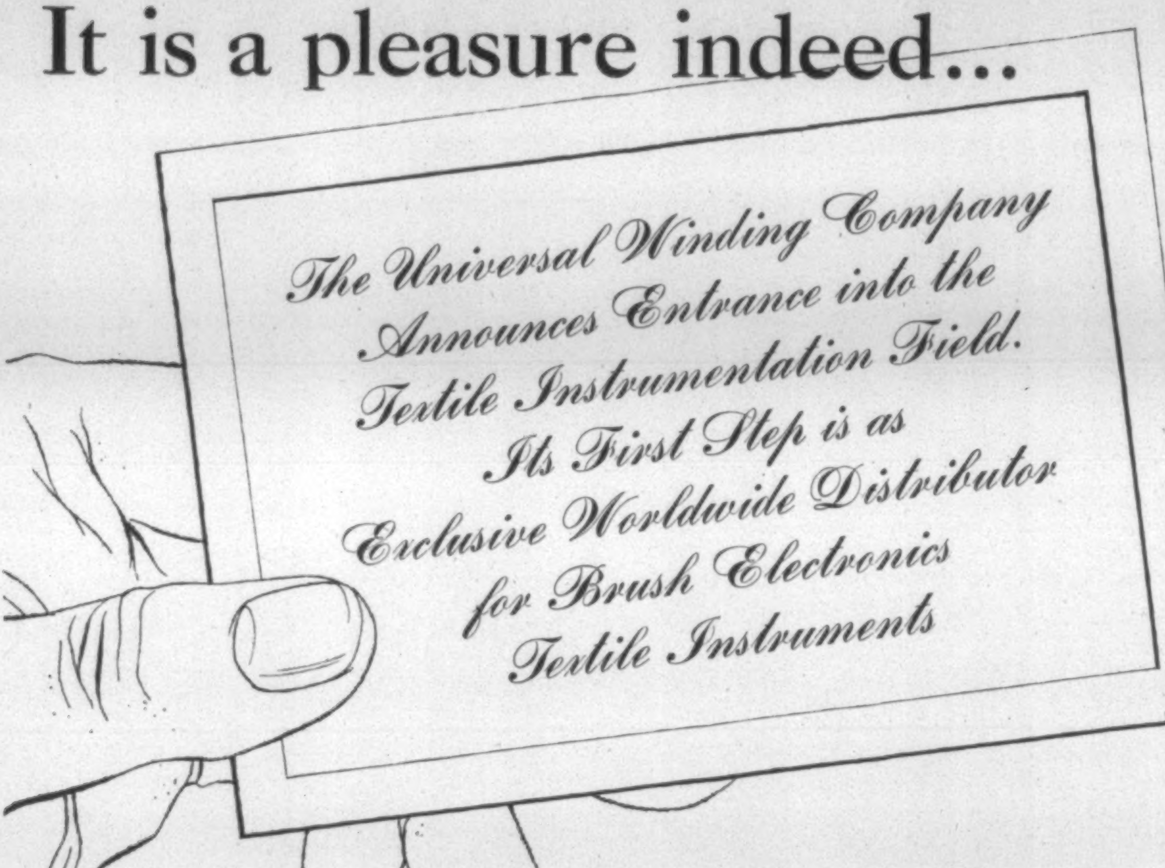

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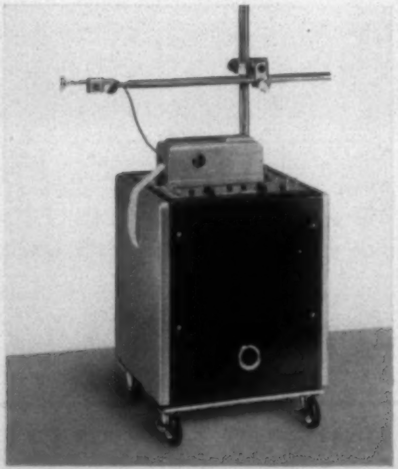
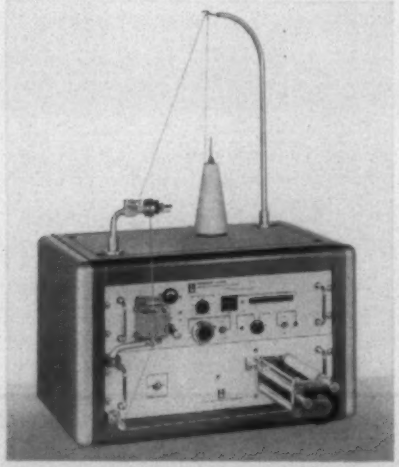


- *The Brush Tension Analyzer* for electronic tension measurement and control in production departments



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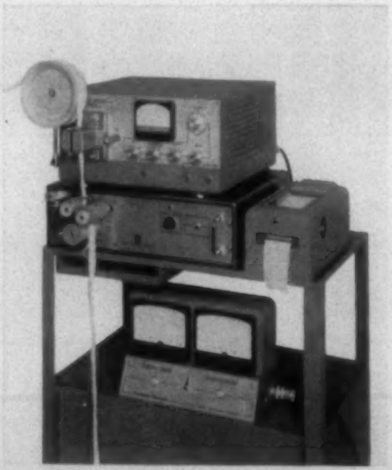

- *The Brush Uniformity Analyzer* for trouble shooting and quality control from opening through spinning

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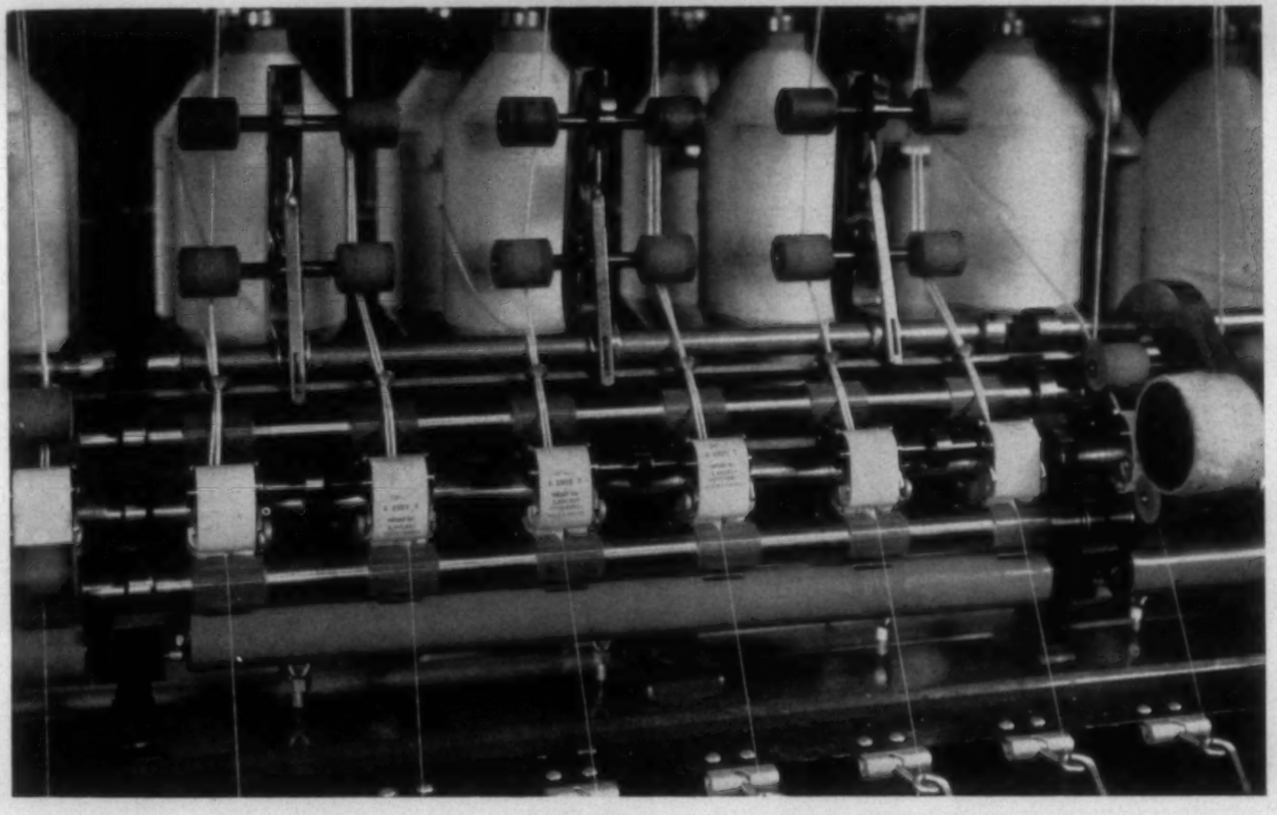

NEW, PROVEN nyaf OUT-PRODUCES ANY ANTI-FRICTION SPINNING YET DEVELOPED!

Swing Saddle Center Suspension, Full Anti-Friction Top and Bottom Spinning Roll Assembly . . . Drafts of 10 to 60!

Here is anti-friction spinning operating at its very peak of efficiency—without parallel in bringing new economy, new dependability, and new ruggedness to your spinning. AND N Y A F® CAN BE ADAPTED TO ANY MANUFACTURER'S FRAME.

Roller Stand 45°. Straight line from trumpet to thread guide. Sealed ball bearing fluted rolls. Runout not to exceed .003". All diameters .0015". No more lubrication problems and worn roller necks. All head end gearing anti-friction with silent chain drive. Cylinders and idlers anti-friction.

DOES YOUR ANTI-FRICTION SPINNING HAVE THESE nyaf FEATURES?

Center-suspension, with rugged center support ● Induction hardened rolls, with ball bearings lubricated and double sealed for life ● Only two moving parts ● Positive dead weight ● Front and middle rolls, with back rolls spring weighted ● Front and back rolls easily dismounted for cleaning and buffing ● No end play in center support ● Fine adjustment of cradle to 5/1000" ● Cannot get out of line ● One adjustment, versus 12 as on old type frame ● Rugged construction takes care of effective weighting up to 120 lbs. and over if necessary, at any roll speed desired ● Assembly and erecting time one-half that of conventional methods ● No oil, therefore less lint ● Cleanest operating assembly available anywhere ● Precision-engineered for perfect roll alignment at all times with fluted drafting rolls ●

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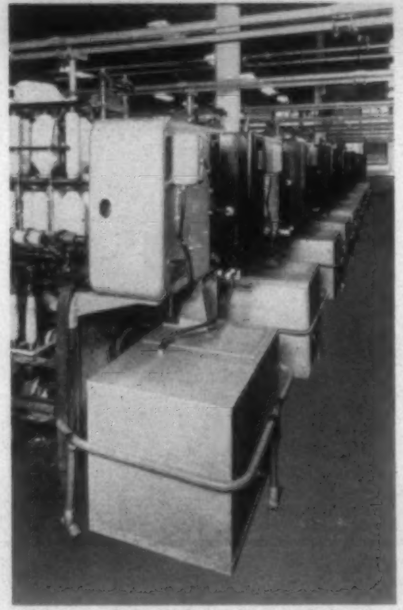
– NEW MACHINERY, EQUIPMENT AND SUPPLIES –

Central Heat Removal System By Bahnson



Bahnson Central Heat Removal System (The Bahnson Co.)

A new design for establishing and maintaining better air conditions in spinning rooms has been introduced by the Bahnson Co. Called the Bahnson Central Heat Removal System, it takes out approximately twice the unwanted spinning room heat removed by other designs, Bahnson reports. The system does 3 jobs at one time: (1) removes both frame motor heat and vacuum collection heat; (2) provides more uniform air conditions with the elimination of concentrated motor alley heat; and (3) cools entire room by lowering room heat load when air handled by the heat removal system is exhausted outdoors.

To avoid disrupting spinning production which would occur due to single fan failure on designs dependent on 1 fan, the Bahnson method is designed to have the flexibility and convenience of the unit system. The design employs individual fan motors for the vacuum collection system and a separate fan handling the air to be removed from the motor alley. When combined with end collection installations, the system consists of a complete independent vacuum collection unit with separate motor for each frame, an enclosure housing each frame motor into which the collection unit discharges, a system of ducts connecting all of the motor enclosures in a given motor alley, and a fan to exhaust air out of these enclosures through the ductwork. In the event the exhaust air fan becomes inoperative, the vacuum collection units continue their normal operation and function.

The Bahnson Central Heat Removal System is adaptable to existing Bahnson Collecto-Vac Systems and can be installed separately, the company points out.

(Request Item No. A-1)

Aro Lint Picker

Oliver D. Landis Inc. is now offering the new Aro lint picker with these important features: (1) lightest and smallest lint picker on the market—weight 13 oz.; (2) free from vibration at high speed; (3) collet guard protects operator's fingers and provides thumb rest; (4) air is exhausted to the rear; and (5) motor speed can be accurately set up to 18,000 r.p.m.

(Request Item No. A-2)

Dayton Rub Apron

A new rubber fabric product to help textile mills produce more uniform yarns with less power consumption has been developed by the Dayton Rubber Co. This new Dayton rub apron has a permanently rough surface for rubbing thin fibers into yarn. Conventional aprons wear smooth, require frequent time-consuming adjustments and use up to 25% more power because they require increased pressure, Dayton points out.

The specially compounded rub apron is used for starting the formation of yarn from a mass of wool fiber. The wool runs through a carding machine or picker and emerges as a thin, fine web. This web then is broken up into "ends" or narrow-web fibers which are passed between 2 aprons and rubbed with an oscillating movement. From this rubbing process comes the first semblance of wool yarn. A similar procedure is followed in making silk, cotton, cashmere, asbestos and most other yarns of long, irregular lengths. The new rub apron fabric was developed with an improved compound which will resist any oils that may be applied to the fibers. Equally effective on wet or dry runs, the apron does not slick up or oxidize, and "tracks" uniformly over the entire surface, Dayton reports.

(Request Item No. A-3)

Laurel Anionic Softener

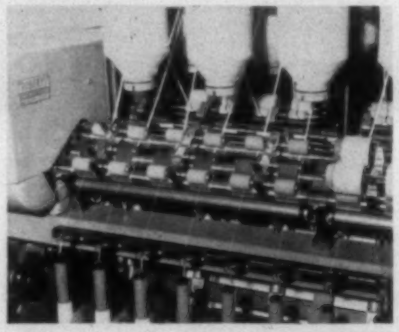
Laurel Soap Mfg. Co. announces the availability of Lauramine RT, its new anionic softener. Recommended for the finishing of cotton fabrics and yarns, the softener may also be used on rayon, wool and certain synthetics and blends with excellent results.

It is described as a soft, fluid paste which is readily dispersible in warm or tepid water, extremely resistant to high temperature and aging effects, and will not change the shade of dyed fabrics or yellow whites. It will impart to a fabric a uniform, full-bodied softness and provide excellent lubrication, which will improve the sewing and cutting properties, the company points out. It reportedly gives fine results when used as a top softener on resin-treated goods and is also an excellent softener for use on goods to be napped, imparting just the right degree of softness and lubrication to the fabric and holding up the nap once it is raised.

It is said to be the ideal softener for printcloths because it resists penetration of the print paste and thereby promotes a higher color value, a property particularly desirable in pigment printing. It is also useful as a replacement for conventional oils and softeners, either wholly or in part, in the Sanforizing process. Applied to denims and chambrays, for example, it will lubricate the fabric as it passes over the shoes, will produce a fabric which is not as limp and raggy as conventional oils, and will also improve the cutting and sewing properties. Samples of Lauramine RT can be obtained by using this journal's reader service request cards.

(Request Item No. 4-A)

Roberts Top Roll Suspension

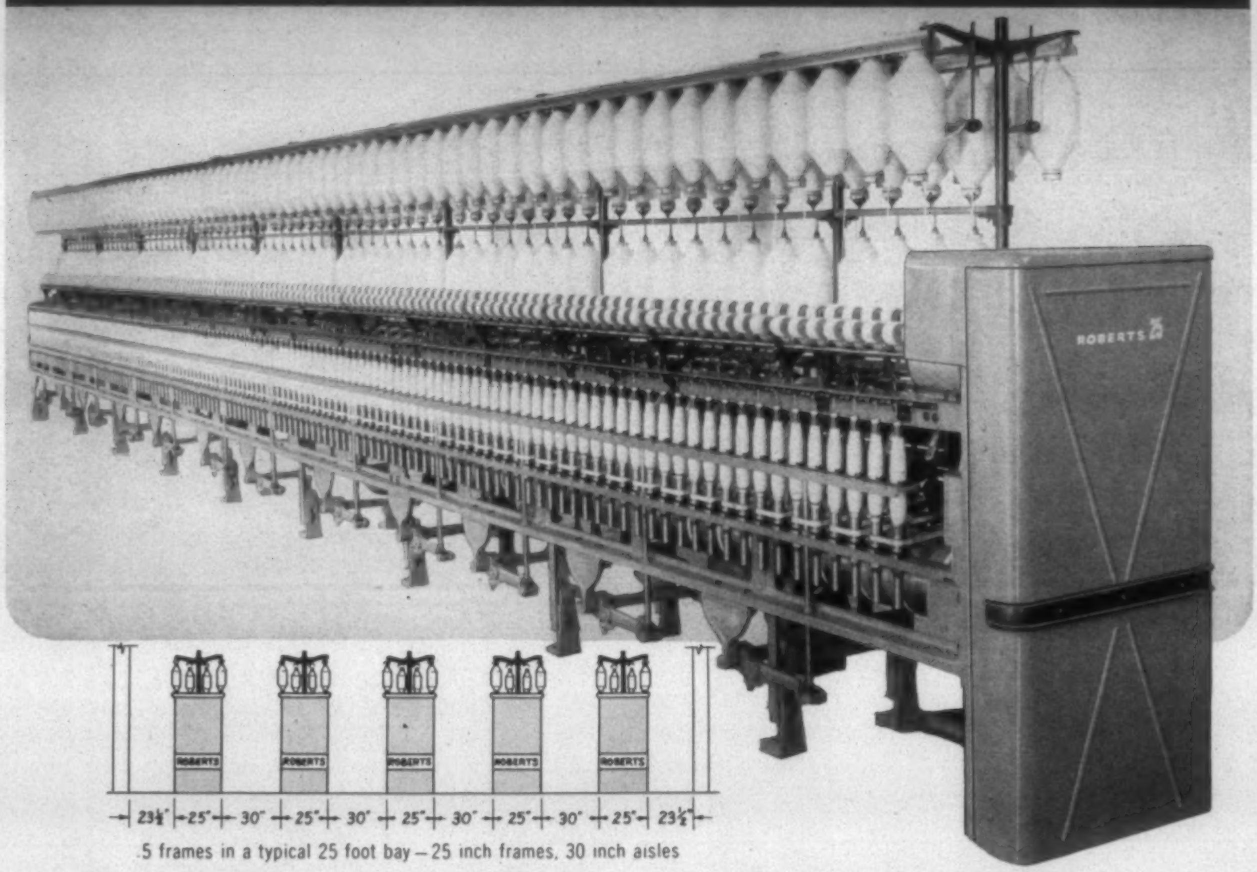


Roberts top roll suspension system (Roberts Co.)

A top roll suspension system which uses double-row ball bearings in front, middle and back lines and incorporates many other important design advantages has been announced by the Roberts Co. Adaptable to several drafting systems as well as its own, the Roberts top roll suspension embodies the following features: (1) Cots are buffed on standard equipment, without attachments. (2) Cots revolve together making lap removal simpler. (3) Full length revolving clearers are used. (4) Front and back rolls are interchangeable making sequence buffing possible. (5) All 3 lines of rolls have double-row ball bearings. (6) Controlled self-alignment is provided. (7) Cots have a hole diameter of ½". (8) The 2-piece labyrinth seal is protected from lint entrance and roll picker damage. (9) Dou-

ROBERTS 25 SPINNING FRAME

- 25 inches wide
- 25% more yarn from same floor space
- 25% less building for same production
- 25% saving in building and utility cost



5 frames in a typical 25 foot bay—25 inch frames, 30 inch aisles

TRIED AND PROVEN. The Roberts 25 Spinning Frame is simple and straightforward, free from radical innovations or gadgets. It embodies all the tried and proven features most wanted in a modern spinning frame giving highest production and lowest maintenance.

ROBERTS DRAFTING. Roberts Double-Apron Drafting produces highest break factors, best yarn evenness and lowest ends down in a range of drafts from 10 to 60, for yarn numbers from 2's to 100's, in cotton, synthetics or blends.

SMALL, MEDIUM OR LARGE PACKAGES. The Roberts 25 Spinning Frame is available in gauges from 3 inches to 4½ inches and can be arranged for direct filling on 8 or 8¾ inch quills or for warp up to a 3 inch ring and 12 inch bobbin.

ALL BALL BEARING HEAD. The all ball bearing head design is outstanding in its simplicity and flexibility. Thirty greased-for-life ball bearings of one size are used and all plain bearings and studs eliminated. All gears in the head are hardened and have one pitch, one width, one bore and one size key, making them completely interchangeable. Two wrench sizes fit all shafts and tightening points. Draft Constant can be varied simply from 400 to 3200 and Lay adjusted for coarse or fine numbers by a simple gear change.

STANDARD FEATURES

Included as standard equipment are Roberts Ball Bearing Spindles, Roberts built-in Suction Cleaning, Roberts AeroCreels and 8 inch Cylinder Drives.

COMPARE ALL 3

For high production, top yarn quality, large packages, low maintenance expense, dependability—and, at the lowest investment per spindle—Roberts Spinning is second to none in America today.

ROBERTS COMPANY

SANFORD, NORTH CAROLINA

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LOOM LUBRICANTS

Since there are various types of looms running at different speeds and under various working conditions, we have made a variety of lubricants which have proven to cut the amount of lubricants, plus labor.

★ **G-C BEN BOY NO. 55-B** is a wonderful bearing grease for all type ball and roller bearings. Either fast or slow, hot or cold.

★ **G-C LOOMOL G-350** is a combination gear and cam lubricant and can be used as a general purpose lubricant.

★ **G-C GEARCO A & W** is a semi-fluid chain and gear lubricant for mills who prefer a semi-fluid lubricant instead of a grease.

★ **G-C NON-MELTING OILS** are general purpose oils (non-soap) that have proven their worth in the Textile Trade. They do not splash or run, last longer and give better bearing life.

★ **SLASHER**—Bearings are no problem with G-C Ben Boy No. 55-B. Your equipment will run longer at higher speeds and higher temperatures for less money when you use the modern lubricant for modern equipment.

SPINNING LUBRICANTS

Top Rolls have been one of the most delicate lube problems in the mills.

G-C Non-Melting Oils have cut lube cost as much as 15 to 40 per cent.

G-C Non-Melting Oils were the first non-soap lubricants ever offered to the entire Textile Industry and records prove the fact that they are the finest products offered today.

We will welcome an opportunity to prove our lubricants will save you down time and labor. Some of the finest Textile Mills in the country have found that the complete line of Ben Boy and Non-Melting Lubricants have proven their place in the mills.

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ble-row bearing raceways are ground directly into ½" diameter shafts. (10) Bearings are grease-packed for life. (11) Conventional dead-weighting or new spring weighting can be used.

An alternative arrangement also available employs a ball bearing top roll and special suspension on the front line only with Roberts cap bars and solid top rolls on middle and back to rolls. Roberts also continues to offer its No-Oil cap bar and saddle system for all 3 lines. (Request Item No. A-5)

Nylon Sizing Method

The Nopco Chemical Co. has announced an improved nylon sizing method that reportedly eliminates top-waxing by combining sizing and lubricating into 1 operation. The improved method uses Nopcosize N, one of Nopco's warp sizes, in combination with Nopcolube 55, a specially developed weaving lubricant. Mill tests of the method show substantial savings, Nopco points out. Not only does it eliminate top-waxing, but it gives the added advantages of better splitting at the split rods and cleaner greige goods. (Request Item No. A-6)

Italian Yarn Tester

Stellite American Corp. has announced the development of a number of improvements on the Model M Autodinamografo, automatic recording dynamometer for cotton, silk, rayon and wool yarns. Stellite American offers the unit in this country for the manufacturer, Fabbriche Elettrotecniche Riunite of Milano, Italy. The improvements cited include: (1) a special creel which is detached from the Autodinamografo and gives a better control of individual threads for testing; (2) a larger, more compact distributor which prevents tangling of yarn after the change of the bobbin and is especially designed with the stress on testing filament yarns and spun staple yarns; (3) a new separation plate between the bobbin of the tester and the revolving arm; and (4) a new waste collection system. Listed as optional equipment is a special table for the tester. (Request Item No. A-7)

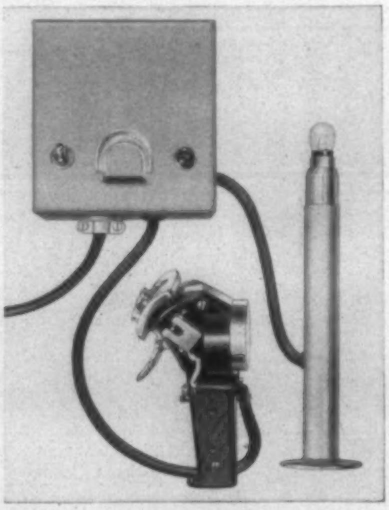
Avisco Carpet Fiber

A new rayon carpet fiber is being produced by American Viscose Corp. The fiber, Super-L, has been especially tailored for use in carpets with a loop construction where its bulking properties contribute improved texture and appearance. Tests performed by American Viscose and by independent laboratories as well have reportedly revealed that Super-L has soil resistance comparable with wool and is non-sensitive to oil, unlike ordinary rayon fibers. Soil is more easily removable from carpets made with the new fiber because the skin of the fiber is absolutely smooth and there are no crevices to catch and hold particles of dirt. According to the American Viscose tests, carpets made with Super-L soil between 30% and 35% less quickly than carpets made with other rayon carpet fibers.

The new fiber is also said to contribute greater wearing characteristics to carpets. Carpets made with the new fiber and with regular carpet rayon were installed in the elevators of the American Viscose main offices in Philadelphia, Pa. Results were said to have proved that the Super-L samples wore 25% better than the others.

Although the fiber has been engineered for use in loop pile carpet constructions, it is also adaptable for cut pile constructions where substantial percentages of wool, Acrilan or other man-made fibers are used. The rise in demand for looped pile carpets, particularly tweed types, prompted American Viscose research technicians to concentrate on perfection of a rayon fiber particularly suited to this construction. Future fibers in the Avisco design series will be specifically tailored for other types of construction, it is said. Super-L will be offered to manufacturers in any denier required for their production, American Viscose points out. (Request Item No. A-8)

Electric Tension Indicator



Tension annunciator attached to the new Saxl tension meter (Tensitron Inc.)

Tensitron Inc. has developed a tension meter featuring a novel electrical contacting device that calls the operator by the flashing of an electric light when tension goes above or below pre-set limits. A tension annunciator is attached to the new Saxl tension meter. Mounted upon an insulating cover, a U-shaped holder on top of the meter holds 2 tension setting screws with special contact points. They can be adjusted so that the lever tilting between them makes contact at any desired tension. Connected to the sensing lever in between them travels an electric contact, the position of which is determined by the tension. Filaments are guided over the rollers of the electric tension indicator. A warning light flashes if tension falls below or exceeds the limits of best running conditions.

A transparent cover protects the contacts. They are free from arcing due to a special circuit. The instrument is free from indefinite contacting and contact burn-out, despite standard 115-volt operation. All electrical

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luxurious hand

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Great new things have been happening to the oldest man-made fiber. In American Viscose rayon research labs—the world's largest—the rayon fiber has been made stronger and more versatile.

Thus it is more useful to you and more desirable to the consumer.

The versatility of this modern Avisco rayon fiber has been further enhanced by modern finishing. In blends with other man-made or natural fibers, it brings all the above fine qualities and many more.

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connections are inside the small switchbox. On the other side of the switchbox is a flexible cable which feeds a clearly visible indicator lamp on the stand to call the operator. The tension unit is small, light in weight, and can easily be attached to any type of frame. (Request Item No. A-9)

Hermas Selvage Trimmers

Hermas Machine Co. reports it has developed a new automatic selvage trimmer to remove hanging selvage threads. According to Hermas, many mills weaving fabrics with wire loop selvages or fabrics developing slack selvages during weaving have been reluctant in the past to use an automatic selvage trimmer. The pendulum-type selvage sensing devices with which selvage trimmers were equipped did not always function properly on this type of cloth, Hermas points out. Field tests by Hermas engineers have proved the pendulum-type devices sometimes permitted the trimmer units to move in too close, resulting in cut wire loops or nicked selvages.

After considerable experimentation with various types of edge sensing devices, Hermas has adopted a unique, split-beam, photo-electric eye equipped with 2-way controls instantly adjustable for varying cloth trimming conditions. Since this new photo-electric eye sensing unit actuates the traverse of the trimming units without touching the cloth, fine control to within 3/32" is achieved, Hermas points out. With this setting, wire loop selvages can be trimmed without cutting the loops and slack selvages trimmed without nicking the selvage. A brochure describing the new unit can be obtained by using one of this journal's postage-free reader service cards.

(Request Item No. A-10)

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THE PERFECT LOOM LUBRICANT

NON-FLUID OIL stays in bearings lubricating instantly and positively until entirely consumed. Result: Peak production at lowest cost.

Ordinary oils drip, spatter and leak onto warps, goods and the floor. Result: High seconds, higher lubrication cost, highest application cost.

Send for Bulletin T-20 and a free sample of NON-FLUID OIL for a fair trial on your looms . . . you will quickly see why 7 out of 10 mills use NON-FLUID OIL regularly.

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NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture. So-called grease imitations of NON-FLUID OIL often prove dangerous and costly to use.

Filler Yarn Truck

Electrically-powered filler yarn truck (Lewis-Shepard Products Inc.)

An electrically-powered filler yarn truck has been developed by Lewis-Shepard Products Inc., producer of electric fork trucks and related materials handling equipment. Each truck is built to travel in narrow aisles. All controls for operating the trucks are located in separate handles at either end. To move a truck in forward or reverse, the operator selects the appropriate direction and squeezes the handle's grip. He walks along with the truck as it travels.

First step in the procedure is loading the shelves of the trucks with boxes of quills of filler yarn. The operator then drives the truck down the warp alley between the looms, filling each loom that requires additional quills. Because the truck is powered by a battery, there are no fumes or odors to contend with in the mill. In addition, there is no danger of inflammable fuels. Constructed of an all-welded frame, the truck will turn in its own radius. Controls for the truck are the same as used with standard Lewis-Shepard "walkie" trucks, except they have no provision for raising and lowering.

(Request Item No. A-11)

Ciba Deorlene Dyes

Ciba Co. reports that the difficulties originally experienced in dyeing Orlon and Acrilan have in large measure been overcome by recent Ciba developments in the field. The company attaches special significance to the work being done in expanding

Increase Roving Bobbin Capacity up to 37%

WITH *NEW* SACO-LOWELL

12"x7" EXTRA RUGGED FLYERS

AND

IMPROVED JUMBO CONE ASSEMBLY

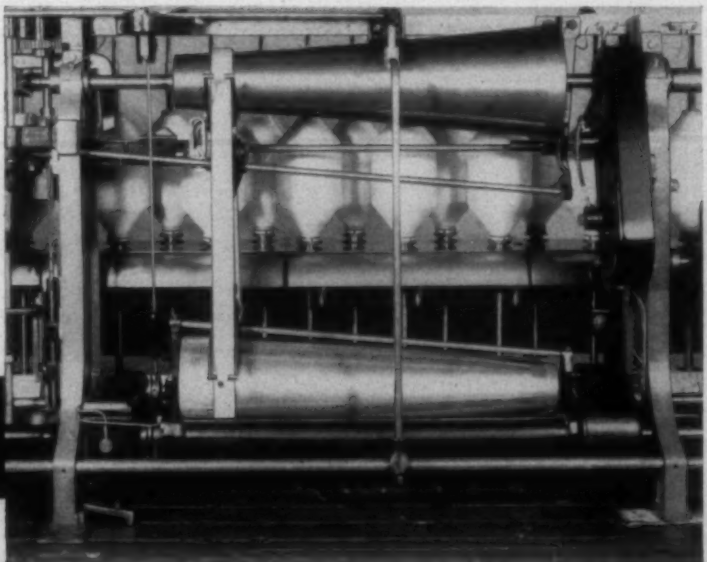
Obtain

√ Higher Efficiency
√ Less Creeling in Spinning Room
√ Less Re-Workable Waste
√ Less Piecing

It all adds up to Increased Productivity per man hour!

The new Flyer is strong enough to make a 12" x 7" package on standard 12" x 6" roving frames without decreasing speed or changing other standard parts. It will run without distortion at speeds up to 735 rpm. In many cases, this new flyer permits the building of a bobbin holding 60 to 62 ounces of roving, which amounts to a 37% increase in bobbin capacity. The cost of equipping standard roving frames with these new 12" x 7" flyers is so reasonable that they pay for themselves in a comparatively short period of time.

Jumbo Cone
The need for additional power to drive long, large package roving frames has been solved by Saco-Lowell engineers increasing cone speed 33% and cone size 50%. The new Jumbo Cone assembly provides a driving element with sufficient power capacity to drive these frames at a very high percentage of efficiency. The new aluminum bottom cone which is also included in the assembly reduces belt slippage to a minimum.



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FOR THE TEXTILE INDUSTRY'S USE—

its Deorlene series of basic dyes of unusual interest: (1) Deorlene Brilliant Yellow 5GL, a bright, greenish yellow; (2) Deorlene Brilliant Red R, a bright, rich red; (3) Deorlene Blue BR, a pleasant, slightly reddish blue.

The very attractive colors of the series lead to dyeings of considerable brightness, Ciba points out, either as self shades or in fashion shade formulas. Fastness properties are paced by the 100 hours light fastness and very good wash fastness shown by Deorlene Brilliant Yellow 5GL. Cost of the 3 dyes makes them quite economical for most shades, while Deorlene Blue BR offers particularly good build-up in darker shades.

The series is said to be particularly suited to dyeing the clean, lively shades generally in demand for Orlon and Acrilan. Teamed with the older Deorlenes, they add fresh significance to this growing group, Ciba points out. For pastel shades or warm, rich colors on sweaters, blankets, suitings and other fabrics, the new dyes are highly recommended. (Request Item No. A-12)

A-C Quick Clean Motor

A new totally-enclosed, fan-cooled textile motor, Type GZQ Quick Clean, available in ratings from ½ to 30 h.p., has been announced by Allis-Chalmers Mfg. Co. The new motor has sealed and pre-lubricated, double-width, single-row ball bearings. It is built with its fan placed on either the shaft end or the front end depending upon the type of driven machine, the location of the motor to the machine and the material in process. Air is blown over the high cooling efficiency, rib-type frame with such force that little dust and lint can accumulate on the motor. The smooth bottom yoke of the motor offers no obstruction to air flow and no place for lint to form. The fan bowl mounting bolts are parallel to the shaft and recessed in streamlined pockets thereby eliminating lugs or bosses on the housing. The motor is available with a 4-conductor cable, standard length 5', and fitting or with the conduit box and conventional short leads. (Request Item No. A-13)

Goodyear Chemigum Latex

A new butadiene-acrylonitrile latex known as Chemigum Latex 247 has been introduced by the chemical division of the Goodyear Tire & Rubber Co. The latex was developed to give improved resistance to discoloration upon exposure to heat or light. In addition to its excellent adhesion and fiber binding qualities, the latex is said to be especially suitable for use in textile backcoatings and sizings.

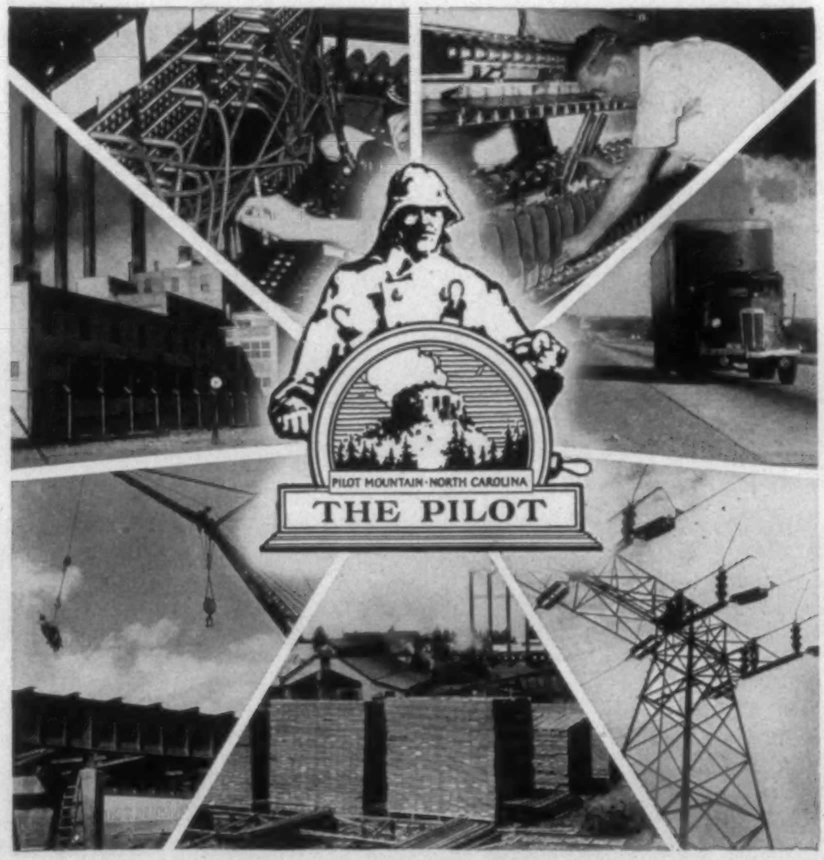
The emulsification system in Chemigum Latex 247 is of the synthetic anionic type and provides good stability for compounding and processing. The latex does not show the extreme sensitivity to copper and metal ions that is characteristic of natural rubber and many GR-S latices. Conventional rubber curing systems can be used with the latex when additional tensile strength or solvent resistance is required. Water soluble thermosetting resins also are compatible and can be used to give increased adhesion and solvent resistance.

Improved light aging of films deposited by Chemigum Latex 247 has been demonstrated by Fade-Ometer tests and by actual roof exposure. While the clear film will show about a 4-fold increase in light stability, pigmented compounds show even greater improvement, it is said. Color stability of the new latex on prolonged heating at elevated temperatures also is outstanding. Unpigmented films show only a slight discoloration after 16 hours at 250° F. This improvement provides increased latitude in processing. Chemigum Latex 247 is available for drum or bulk shipment.

(Request Item No. AA-13)

Aquanalyzer

Control Circuits Inc. has announced the development of a new control device called the Aquanalyzer, an indicating system that compares the electrical resistance of water entering a tank with the resistance of water being released from the tank after use in a manufacturing operation. When the resistance of influent and effluent are equal, the Aquanalyzer actuates a relay and another operation can be automatically started. The control may be pre-set to operate at any desired differential or to any specific resistance setting. A continuous sampling of the fluid's resistance is obtained through use of specially designed conductivity cells placed



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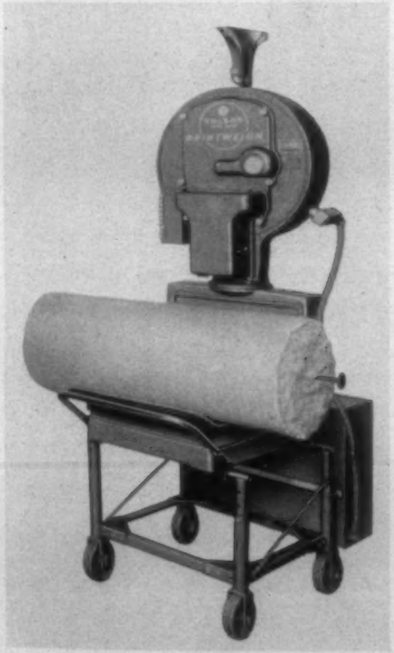
at influent and effluent points. These cells transmit resistance readings to a central electronic control point where the readings are quantitatively analyzed and compared and where control of the device is centered.

Many features have been developed in this device that make the control sensitive to the slightest change in the solution, the manufacturer reports. The cells are free of any plating tendencies and are not effected by any other electrical currents in the solution such as may be encountered in a plating tank, it is said. Several types of cells are available that can readily be installed in a pipe or tank. The design is such that these cells cannot catch lint or solids. The control units are self-contained and may be wall-mounted. Standard units are available that can individually control and indicate solution in 1 to 5 tanks.

In an installation of the device in a woolen mill, the Aquanalyzer controls the flow of water used in a washing cycle. In an operation which requires exceptionally large quantities of heated water, the device is said to have effected a two-thirds savings in washing time and water requirements. The rinse water in this case is monitored and when the last trace of soap or detergent has been washed out of the wool and the rinse water is as clean as the incoming water, the device stops the washing process.

(Request Item No. A-14)

Cotton Lap Scale



Toledo Model 9645 cotton lap scale with automatic Printweigh (Toledo Scale Co.)

Toledo Scale Co. has announced the development of a new cotton lap scale with automatic Printweigh. The company points out that this checkweighing system is unique in that a bull's eye shutter conceals the weight from the picker operator until the print has been made. This quality control

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feature combined with the automatic printer is said to eliminate the possibility of manipulation to bring off-weight laps within tolerance and assures of a greater percentage of in-tolerance laps.

The Model 9645 cotton lap scale is furnished with a special tare beam, graduated from zero to 15% x 1/8% to compensate for moisture content of laps, trough-shaped lap pan for efficient weighing of laps; also adjustable rubber tired straight-wheel stand and push-bar for easy movement along the picker line. The unit is finished in durable gray enamel. Optional equipment includes tolerance lights which enable the operator to readily identify "OK" or "REJECT" laps; reject identification which prints "REJ" on the tape adjacent to the weight figure; and a selective numbering device which permits the printing simultaneously of a figure identifying the picker along with the weight figure.

(Request Item No. A-15)

Baked Enamel Finish For Textile Screens

A baked enamel finish is now being offered on picker screens, condenser screens, waste machine screens, filter screens and other screens for the textile industry by Jenkins Metals Shops Inc. Although perforated metal has been used in making screens of this type for some time, Jenkins points out, it has only recently been tested and approved for use on cottons to any great extent. Jenkins can now furnish screens for any purpose made from heavy-gauge perforated metal with the baked-on finish which eliminates rust or regular paint from mixing with the stock. Additional information can be obtained by using one of this journal's reader service request cards.

(Request Item No. A-16)

High Temperature Lubricant

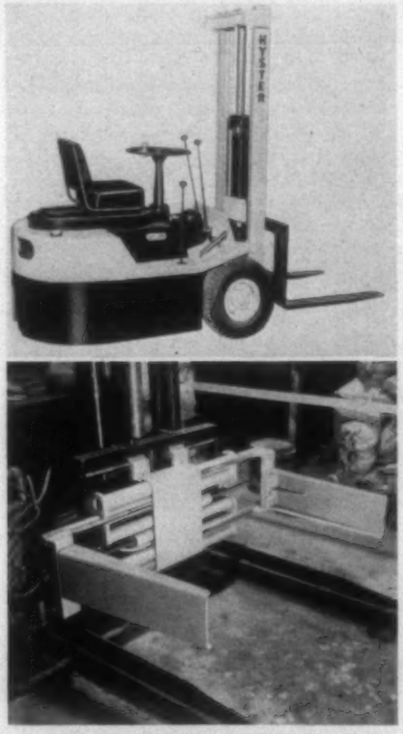
Keystone Lubricating Co. announces that it has developed a specialized lubricant that solves the troublesome problems of oil carbon deposits in machines operating at high temperatures. The oil, known as Keystone No. 49 Light, resists oxidation, sludging and breakdown when subjected to severe laboratory and field tests. Developed primarily for air compressor use, its low carbon content and anti-gumming features make it a superior lubricant for such applications as ring bearings in electric motors, multi-plate friction clutches, plastic molding heat transfer systems, drying oven conveyor chains and tenter frames.

To determine carbon residue under heat, Keystone laboratory technicians tested Keystone No. 49 Light with several other lubricants. They poured the oils into watchglasses and baked them in thermostatically-controlled ovens for 72 hours at 300° F. They then checked the containers for telltale carbon residues—an indication of how the oils will stand up in high temperature use. Not a trace of carbon residue was found on the watchglass containing Keystone No. 49 Light.

Tests at maximum operating pressures have been made with air compressors and other machinery in hot, cold, wet or chemically contaminated atmospheres, the company points out. In every case, Keystone No. 49 Light showed marked superiority over competitive oils. It demonstrated 500% longer usability, 66% savings in maintenance costs and 60% savings in oil consumption and substantial power savings.

(Request Item No. A-17)

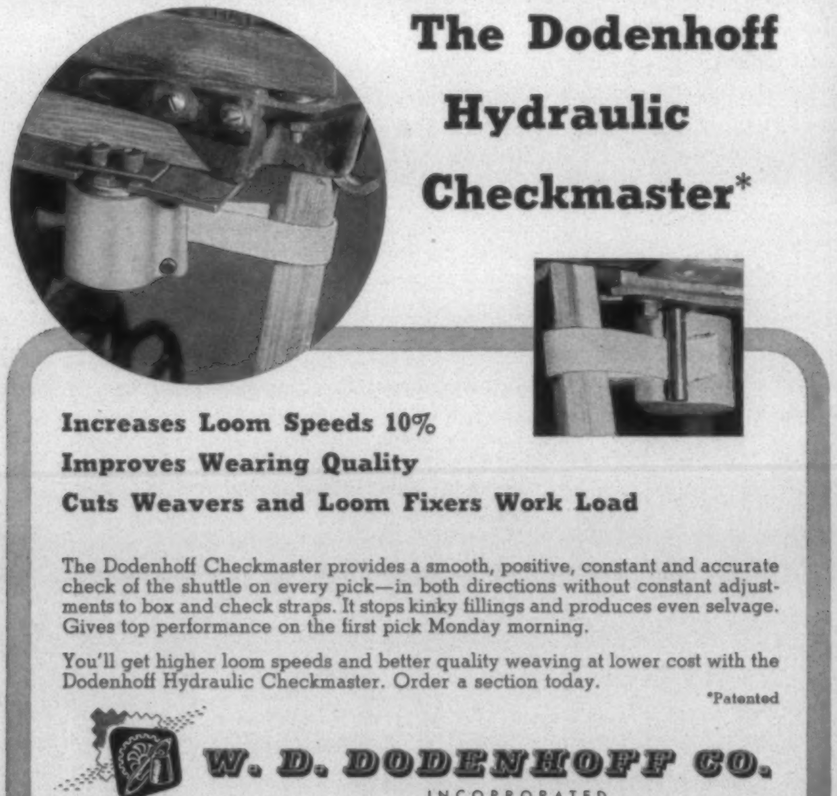
Hyster 20 Lift Truck



New Hyster 20 *(top)* features new VH4 engine, and may be equipped with Hyster 30 Load-Grab clamp *(below)* (Hyster Co.)

The Hyster Co. reports that greater power and faster, easier operation feature its new Hyster 20 lift truck, Model QC, 2,000 lbs. capacity on pneumatic tires. Increased versatility is also reported with the addition of new optional job attachments and LP-Gas installations. The company points out that high torque characteristics and increased horsepower is provided by Wisconsin's new 4-cylinder air-cooled Model VH4 engine. Improved operating ease and speed are said to result from a repositioned instrument panel, improved upright design and use of constant mesh transmission. With dental clutches, instead of sliding gears, the constant mesh transmission gives longer life and easier, smoother shifting.

LP-Gas equipment, approved by Underwriters' Laboratories and now optional for the Hyster 20, gives increased engine life, longer oil and oil filter life, lower fuel costs, lower maintenance costs and reduction of exhaust fumes. The Hyster 30 Load-Grab clamp, with greater gripping force, and side-shift carriage are recent additions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- **CLEANERS**
  - Derby Continuous Dry Cleaners
- **COMPACTING MACHINES**
- **CRUSHERS**
  - Continuous
  - Semi-continuous
- **DYEING EQUIPMENT**
  - Dye Becks
  - Dye Kettles
    - Piece Dye Kettles
    - Rug Dye Kettles
    - Sample Dye Kettles
    - Stock Dye Kettles
      - Standard
      - Hy-Temperature
  - Top Dyeing Machines
- **DRYERS**
  - Tenter
- **FULLING MILLS**
  - Cloth
  - Endless Felt
- **LABORATORY MACHINES**
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RIGGS and LOMBARD Inc.

to the extensive number of job attachments now available for the Hyster 20. The Load-Grab clamp, a Hyster development, permits the handling of loads by hydraulically-actuated arms which grip difficult to handle objects from the side, eliminating palletization. The newly available side-shift carriage shifts entire loads and speeds handling by reducing truck maneuvering time. Specifications on the Hyster 20, Model QC, can be obtained by using one of this journal's reader service request cards.

(Request Item No. A-18)

Compressed Air & Gas Trap

An entirely new type of compressed air and gas trap has been developed by Hankison Corp. The Mag-Pneu-Power trap discharges condensate from compressed air or gas lines by a combination of magnetic, pneumatic and automatic action. Operation of the trap is said to be simple yet effective. As the condensate in the trap rises, the float *does not rise,* but is held firmly in place by the magnet mounted on the pivot arm. When the force build-up of the condensate working on the float overcomes the magnetic attraction, the float snaps open the pilot valve.

Air enters the pilot valve, flows down the stem, and up under the piston, forcing the piston assembly upward. As the piston assembly moves upward it opens the main discharge valve. The condensate is forced into the main discharge valve by the system pressure, and out into the discharge outlet. When sufficient condensate has been discharged, the float drops, and the magnetic attraction of the magnet to the float arm causes the snap closing the pilot valve. When the pilot valve snaps shut, the air supply to the piston is cut off. The air in the piston chamber bleeds through a minute orifice; the piston immediately returns to its original position, closing the main discharge valve.

The piston mechanism in the trap is completely sealed off from the condensate to prevent damage or clogging. Pressure range of the trap is from 10 to 200 p.s.i.g. Hankison also plans to offer the trap as an integral part of its Condensifilter units. The Condensifilter is a condenser-filter unit that removes moisture and contaminants from compressed air or gas.

(Request Item No. A-19)

Molded Plastic Wheels

Molded plastic wheels in many new sizes and capacities are offered by The Hamilton Caster & Mfg. Co. under the trade-name of Plastex. The wheels are made of macerated heavy weave canvas duck, impregnated with phenolic resin compounds and molded under extreme heat and pressure. This material reportedly resists corrosion from mild acids, oil and greases. The wheels are floor protective under extreme loads, comparatively noiseless and shock absorbent; practical in temperatures ranging from minus 40° F. to 210° F. Sizes range from 3¼" to 12" diameter; load capacities from 300 lbs. to 3,000 lbs., each. The wheels are available with Hyatt-type or Timken tapered roller bearings, and Zerk pressure grease fittings.

(Request Item No. A-20)

Diehl Fan-Cooled Motor

A new fan-cooled motor that combines the low maintenance characteristics of enclosed units with the space saving size of open frame motors has been announced by the Diehl Mfg. Co. The totally-enclosed, fan-cooled design of the new Diehl motor prevents ring-rail grease, dirt, threads, lint and drippings from entering the motor, according to Diehl. Yet, the new motor is actually smaller than conventional fan-cooled types and no larger than open frame motors of equivalent horsepower.

Another important feature of the new motor, Diehl points out, is its ability to operate at a continuous 15% overload. This is attributed to the novel unitized construction of the rotor and fan blade that assures maximum heat transfer and cooling. Designated the Type DIL, the new motor conforms to new space saving N.E.M.A. frame sizes and may be installed beneath spinning and twisting frames. The company claims that it is adaptable to all types of textile machinery.

Diehl engineers point out that the size reduction is due to the cooling and cleaning fan being designed as part of the motor enclosure. The outer bearing is incorporated into the cast iron fan cover. The fan and cover assembly can be ordered for mounting on either end of the motor to suit specific applications. The drive end of the new motor is equipped with a heavy-duty ball bearing. Pre-lubrication at the factory assures maximum bearing life. The motor is regularly supplied with standard leads and a terminal box of pressed steel. It is also available with vinyl-covered cable, oil and water-tight fittings and knife-type disconnectors on the motor terminal leads. This type of connection offers maximum convenience in servicing Diehl reports. The individual leads as well as the connectors are coded to facilitate hook-up even when the cable is shortened.

Other details of the motor include a die-cast rotor, Mylar-insulated windings, an aluminum fan and cast iron frame. The new motor is designed to take a flange mounting if desired. It can also be furnished with a disc brake when ordered with fan on the drive end. The motor is designed for 4, 6 or 8-pole ratings (4-pole ratings from 7.5 to 20 h.p.) in frames 2,540 through 2,860, and conforms to N.E.M.A. design standards.

(Request Item No. A-21)

Polyethylene Printing Unit

Lee Machinery Corp. has announced completion of its new line of flexographic printers designed specifically for high-speed printing on polyethylene. Available in from 1 to 4 colors, presses operate roll to roll set up to feed into folder, sheeter, or packaging

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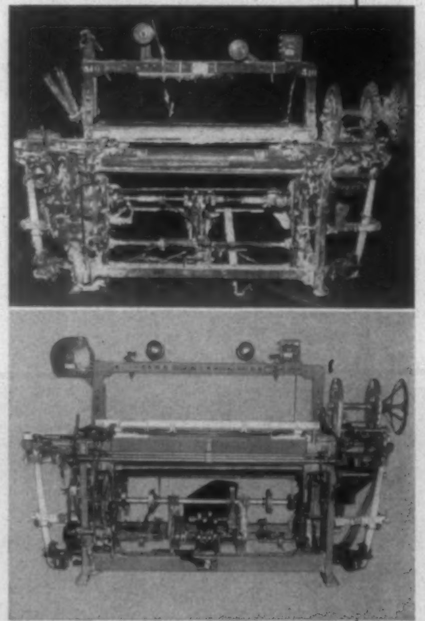

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machinery, and handle with equal facility and fine register paper, polyethylene, cellophane, foils, pliofilm and cloth.

The standard press is 27" wide, but is made available in widths from 15 to 30". Printing repeats range from 4 to 35". Register may be adjusted laterally and horizontally while press is in operation. Other features include forward and side adjustments on the unwind stand and brake tension control; 2 ink fountain rollers for each color of bronze and rubber; a plate cylinder throw-off that moves up and down away from the impression cylinder and ink rollers; splashproof, stainless steel, self-locking ink fountains, elevator mounted for simplified up and down movement; and bronze, split-type plate cylinder bearings for swift and simple cylinder changes.

All parts of the Lee Poly Printer are manufactured in the United States, all gears are American standard 10 pitch. The standard Lee Poly Printer weighs 2,300 lbs., width 56", length 57" and height 72".

(Request Item No. A-22)

New Cibalan Series Colors

Ciba Co. Inc. announces the addition of two new dyes to the Cibalan series. The introduction to the market of a brilliant red and a slightly reddish blue in this series brings to 29 the total of Cibalan dyes, all of which have characteristic Cibalan dyeing and fastness properties.

Cibalan Brilliant Red BL yields attractive shades from pastel pink to bright crimson. Its color places it in the "brilliant" group with two other Cibalans, Brilliant Yellow 3GL and Brilliant Blue GL. Because of its color and unusual fastness in its shade range (80-100 hours in sunlight), Cibalan Brilliant Red BL stands out in any group of red dyes for wool and nylon. It is also well suited for shading dyeing formulas of other Cibalan colors.

Cibalan Blue FBL produces a pleasant, slightly reddish shade of blue, ranging to royal blue in heavier shades. With all-round good fastness, it is applicable at all stages of yarn and fabric processing. Well suited for combinations with other Cibalans, it is especially recommended as a base for navies and for toning clean violet shades. Dyeing procedures for the Cibalans are simple. The goods are run either in neutral or acid baths (with the assistance of Cibalan Salt S). No aftertreatments are required.

(Request Item No. A-23)

For the Mill Bookshelf

Lurex Metallic Yarns

The Dobeckmun Co. is introducing the first bulletins ever circulated on the technique of working with non-tarnishing metallic yarns. The bulletins treat of Dobeckmun yarns only—Lurex, Lurex-MM (Metalized Mylar) and Lurex-MF (Mylar and foil). Information in the bulletins ranges from introductory descriptive data to wet processing procedures. Eight bulletins have been released to date, with subjects as follows: (I) Introduction; (II) Physical-Chemical Properties; (III) Twisting; (IV) Winding; (V) Quilling; (VI) Warping; (VII) Weaving; and (VIII) Wet processing.

Dobeckmun points out that the data contained in the bulletins has previously been made available to the trade by company technicians in the extension of personal service. But, although these services have been broadened every year, expanding interest in Lurex has made the bulletin service necessary. Additional bulletins will be added to the series from time to time, Dobeckmun advises. (Request Item No. A-24)

Finishing Fabrics Of Arnel & Arnel Blends

Latest commercial formulas for dyeing, printing, finishing and heat treating fabrics of Arnel and Arnel blends are described in a new technical bulletin, TD-15A, now available from the textile division, Celanese Corp. of America. Formulas for efficient conversion to commercial operations, described in the 56-page bulletin, provide a greatly expanded number of selected dyes that give unusually good results in washfastness, sunfastness, gas fading and sublimation on heat treatment. The number of dispersed dyes found satisfactory is increased to 47, providing 19 additional formulas. The sections on Azoic dyeing and on printing are greatly expanded and brought up to date. In addition, data on 34 selected fixable direct dyes for use on cotton in Arnel-cotton blends have been included. The number of colors in the tables listing color range and performance is increased by 10, bringing the total to 29. Also, a new section on Arnel-acrylic blends has been added to the bulletin. (Request Item No. A-25)

Antifoam Agent

A factual information sheet describing the properties and applications for Hodag Antifoam S-88 is available on request from Hodag Chemical Corp. Hodag Antifoam S-88 is designed to efficiently prevent the formation of foam in activated sludge waste treatment plants. Liquid S-88 is applied manually or automatically to the aeration tanks. Usages of 0.5 to 1.0 parts per million are average for normal foaming conditions.

(Request Item No. A-26)

Loom Mount

A new mount designed for use under looms is described in a new bulletin offered by Clark, Cutler, McDermott Co. Called Giant Grip Air-Loc, the vinyl mount features deep serrations and semi-soft gripping surfaces which eliminate the need for bolts or paste. Copies can be obtained by using one of this journal's postage-free reader service request cards.

(Request Item No. A-27)

Power Truck Couplers

A new truck engineering bulletin illustrating and describing various types of couplers available from and used on its line of power trucks has been released by The Elwell-Parker Electric Co. The literature covers the pin type, which can be had in various dimensions and sizes according to specific requirements; the double height pin type which permits 2 coupler heights; the automatic coupler which can be adapted for hand or foot operation; the remote control pin type which permits hand or foot operation from the driver's seat; the U-bolt type and the pin type with chain which may also be operated from the driver's seat. Each coupler type is illustrated and described. (Request Item No. A-28)

Dyestuff Circular

General Dyestuff Co. announces the release of Circular G-796 describing its Rapidogen Black I, a stabilized azoic type in powder form of exceptional tinctorial strength. The literature points out that the product gives prints that are adequate in light fastness for cotton and rayon dress goods and in wet fastness for materials that must withstand severe washing.

(Request Item No. A-29)

How To Handle Expendable Pallets

Signode Steel Strapping Co. offers an illustrated chart which describes the most efficient methods of handling expendable pallets of wood or non-wood construction. Designed for use by shipping room and loading dock personnel, it includes instructions for loading boxes on pallets, handling pallets by fork trucks and hand pallet trucks, and both truck and carloading methods. (Request Item No. A-30)

Solvay Products Book

A comprehensive new book containing detailed information on the entire line of Solvay alkalies and chemicals has been announced by the Solvay Process Division, Allied Chemical & Dye Corp. This *Products Book*, as it is called, includes informative data on the uses, markets, physical and chemical properties, packaging and handling and storage of the Solvay line. Also included is a listing which groups the products by consuming industries or manufacturing processes. The book is illustrated with photos of buildings and manufacturing operations at the various Solvay plants. To obtain a copy of this book, without cost or obligation, use one of this magazine's postage-free reader request cards.

(Request Item No. A-31)

Hyster Hystamatic Drive

The advantages of torque converter drive for lift trucks are described in new specification sheets on the Hystamatic Drive, now being made for Hyster lift trucks. This transmission is available as optional equipment for the all-new 3,000, 4,000 and 5,000-lb. capacity Hyster 30, 40 and 50 lift trucks on pneumatics in addition to their Space Saver lift trucks of the same capacities on cushion tires.

The literature points out that the Hyster-built torque converter transmission allows positive "inching" control which greatly improves performance and allows combined "inching" and raising of load at full lifting speed. Low high-gear shifting is eliminated and synchronizer speeds forward-reverse shifting. These features safely speed up operating time and minimize operator fatigue resulting in more trips per hour. Smooth power flow improves traction and eliminates engine lugging contributing to increased life of engine, transmission and drive axle. Simplicity of design of the Hyster Hystamatic Drive provides a minimum of working parts, and the elimination of critical adjustments offer increased ease of servicing. All gears and bearings operate in oil from a common supply continually maintained at proper working temperatures by rotating of the converter, which draws air through the drive and housing.

(Request Item No. A-32)

Viscometer Recorders

Norcross Corp., manufacturer of viscometers, has published Bulletin No. V-1217 on its new line of Model R3 series viscometer recorders. Four models are included in the series: Model R30, recorder only; Model R31, recorder with 1 adjustable switch point; Model R32, recorder with 2 adjustable switch points; and Model R33, recorder with 3 adjustable switch points. The bulletin points out that Norcross Series R3 recorders contain synchronous motors, switches and other necessary electrical and mechanical components to accurately record the time of fall of the piston rod assembly in Norcross viscometer measuring elements.

(Request Item No. A-33)

Quaternary Ammonium Salts

The chemical and physical characteristics of quaternary ammonium salts made by the chemical division of Armour and Co., along with their applications and formulations, are outlined in a new booklet called *Arquads*, the Armour tradename for quaternaries. Described as wetting, sanitizing and emulsifying agents, the Arquads may be water soluble, oil soluble or water dispersible, depending on their composition. They are used in the textile industry as anti-static agents and as softeners.

(Request Item No. A-34)

Care And Feeding Of Rubber Rolls

The industrial roll division of Rodney Hunt Machine Co. is offering a report on industrial rolls entitled, *Care And Feeding Of Rubber Rolls*. The literature points out that two cardinal principles should always be followed when rolls are purchased: (1) buy rolls properly engineered for the work they are to do and buy them from experienced roll manufacturers; (2) be sure that the rolls are included in the plant maintenance program. The literature then lists a number of rules and practices that when followed will provide increased roll life. A number of common rubber roll troubles are given, along with their causes and recommended treatments.

(Request Item No. A-35)

Blanket Printing

Is This The World's Toughest Test For Brushes? is the title of a new illustrated 4-page brochure published by M. W. Jenkins' Sons Inc., manufacturers of Jenkins' Metlkor brushes for the textile industry. The problems of early methods of textile printing are discussed, as well as the rapid and revolutionary changes in the industry after World War II. The brochure features the new flexible, high-speed textile printing process Darex Versaprint, developed by Dewey and Almy Chemical Co., a division of W. R. Grace and Co. Diagrams show details of the process and mechanical phases of the operation. The application of Jenkins' Metlkor brushes in the Darex washers and dryer units is illustrated with photographs. (Request Item No. A-36)

Oxidation of Dyes

The latest information on oxidation of vat and sulfur dyes on cotton and synthetics is published in Bulletin No. 75, just released by Becco Chemical Division, Food Machinery and Chemical Corp. Typical procedures for oxidation of vat dyes with hydrogen peroxide or sodium perborate, and sulfur dyes with ammonium persulfate are presented in the 13-page booklet. Bath concentrations, make-up for mix tank, feed rates, bath temperatures, pH adjustments for continuous and jig dyeing of piece goods, and package dyeing of yarn and raw stock are discussed in detail. A continuous dyeing procedure, which combines an oxidizing and soaping operation in a single tank and thereby makes available an extra compartment for rinsing, is outlined. The new bulletin also offers a section describing the unique advantages of ammonium persulfate for

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producing brighter shades, improving hand and other characteristics, as well as allowing easy corrections of off-shades and a wide latitude of bath concentration without effecting the most sensitive of sulfur dyes.

(Request Item No. A-37)

Lunkenheimer Products

A newly-revised edition of *Guide for Selecting Valves, Boiler Mountings, Lubricating Devices* has been published by the Lunkenheimer Co. New sections, describing revolutionary new LQ600 Bronze Globe Valves, with Brinalloy Seats and Discs; Luncor PVC All-Molded Valves, which are completely resistant to industrial chemicals; and Lunkenheimer Solder End Valves have been added to the 24 pages of tables, technical data and information on the selection of valves, boiler mountings, and lubricating devices. Completely indexed for easy reference, it is identified as Circular No. 555, Valves (A.I.A. File No. 34).

(Request Item No. A-38)

Faults Found in Rubber Rolls

The maintenance of rubber rolls is the subject of Roll Report No. 11, recently published by Rodney Hunt Machine Co. A handy table lists faults and the causes of faults commonly found in rubber rolls, together with recommended treatments. Also presented is a thorough discussion of maintenance techniques, with recommendations about problems involving grooves, cracks and surface damage, lubrication, cleaning, transportation and storage. Emphasized is the necessity for a regular inspection program when rolls are put in service. Roll Report No. 11 will help roll users to get maximum efficiency and quality of production through systematic roll maintenance.

(Request Item No. A-39)

Data Sheet Describes Vatrolite

A new data sheet describing improved Vatrolite, a specially concentrated, granular form of sodium hydrosulphite, is announced by the Royce Chemical Co. Vatrolite is a powerful agent that has wide applications in the textile industry for vat dyeing and color stripping. The new data sheet describes the application of Vatrolite in pad-steam dyeing, indigo dyeing, reduced vat dyeing, stripping direct colors and in vat color stripping. Times, temperatures and stock preparations are given. The data sheet also cites the properties and advantages of improved Vatrolite for textile industry use.

(Request Item No. A-40)

Compressor Bulletin

A 16-page bulletin AC-15, showing a complete line of small, air-cooled compressors for industrial and general use is offered by Gardner-Denver Co. The compressors described are widely used for a variety of shop jobs. Both 1 and 2-stage compressors are offered, with working pressures ranging from 85 to 175 p.s.i. Models shown include bare compressors and those with horizontal and vertical tanks. The latter models are

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designed for use in limited space. Complete specifications for each model are given. A popular trailer model used extensively in industrial plants, is also included.

Gardner-Denver compressors are offered with a wide selection of controls for automatic starting and stopping, and for constant speed installations. In addition, weatherproof, explosion-resistant and gas-tight controls are available. Two handy charts—one for figuring compressor needs and another showing estimated free air consumption for 30 common shop jobs—are printed.

(Request Item No. A-41)

A.A.T.C.C. Manual & Year Book

The 1956 edition of the *Technical Manual and Year Book of the American Association of Textile Chemists and Colorists*, containing the only published list of American dyestuffs, plus a complete list of chemical specialties available for textile wet processing, has just been published. The 626-page, large-size volume, hard-covered in Perkin mauve, is divided into 7 major sections: A.A.T.C.C. organization, committee reports, A.A.T.C.C. test methods, bibliography, dyestuffs and textile chemical specialties list, buyers guide to suppliers, and membership list.

The dyestuffs and textile chemical specialties list (Part V) includes a tabulation of American dyes (arranged alphabetically, by color index number and by prototype number), a list of resin-bonded pigments (alphabetically and by RB numbers) and a list of textile chemical specialties.

The organization section of the year book is devoted to names, titles, company affiliations and locations of national officers; past presidents; council committees; research committees; and reference committees. Also included is information on A.A.T.C.C. affiliations with other societies and associations, and personnel and reports for the 14 local sections of A.A.T.C.C. Information is also given on the Olney Medal Award, the *American Dyestuff Reporter* Award and student awards.

Part III—A.A.T.C.C. test methods—gives details of the association's standard tests, information on new tests and revisions, and a numerical list of test methods, plus data on test methods adapted from the British Society of Dyers and Colourists.

Part IV is a bibliography section devoted to an extensive list of articles in scientific journals and references to books in the wet processing field.

Part VII is devoted to a list of corporate members, sustaining members, and then all members of the association, listed both alphabetically and geographically.

Copies may be obtained from George P. Paine, executive secretary, American Association of Textile Chemists and Colorists, Lowell (Mass.) Technological Institute, Lowell, Mass. Prices, postpaid, are: $6 per copy to non-members; $5 to members for one extra copy; $4 to new members in the U. S. and Canada. Elsewhere, these prices are 50 cents higher in each case.

Analysis Of Synthetic Detergents

(*Bibliographical Abstracts of Methods for Analysis of Synthetic Detergents;* published by the American Society for Testing Materials, 1916 Race St., Philadelphia 3, Pa.; 44 pps.; $1.50)

This booklet has been prepared to fill the need arising from the increasing interest in analysis of synthetic detergents. It brings up to date and supersedes the 1953 edition with 311 abstracts as compared to the 96 in the previous edition. As far as possible the original references have been abstracted with the peculiar needs of analysts in mind. References and abstracts are arranged chronologically from 1888 through 1955 with seven 1956 items listed. There are complete subject and author indexes.

A.S.T.M. Standards

The American Society for Testing Materials has announced publication of 1956 supplements to the *Book of A.S.T.M. Standards*. Part 7 of the supplements covers textiles, and its 220 pages include 34 standards covering fibers, yarns, threads, cordage, fabrics, cotton, rayon, acetate, silk and wool. The supplement, in heavy paper cover, can be obtained from the American Society for Testing Materials, 1916 Race St., Philadelphia 3, Pa., for $4 per copy.

Research Triangle Story

The story of North Carolina's dynamic new approach to industrial development is told for the first time in a booklet just published by the State Department of Conservation and Development. Entitled *North Carolina's Research Triangle*, this publication is free upon request.

The Life and Times of King Cotton

(By David L. Cohn; Oxford University Press, 114 Fifth Ave., New York 11, N. Y.)

This work comprehensively considers the role of cotton in America and how it shaped lives and events throughout the world. The author's approach is that he deals with people rather than statistics, paralleling cotton's history with the story of the millions of men, women and children, white and Negro, slave and free, whose lives were devoted to the crop. The book is a panorama of the political, economic and social story of the cotton kingdom.

Edgar Marburg Lecture

The American Society for Testing Materials has announced publication of the Edgar Marburg lecture presented at the 1955 annual meeting of the A.S.T.M. by Walter J. Hamburger, director and treasurer of Fabric Research Laboratories, Dedham, Mass. The title of the lecture is *A Technology for the Analysis, Design and Use of Textile Structures as Engineering Materials*. Copies can be obtained from the American Society for Testing Materials, 1916 Race St., Philadelphia, Pa., at $1.50 each.

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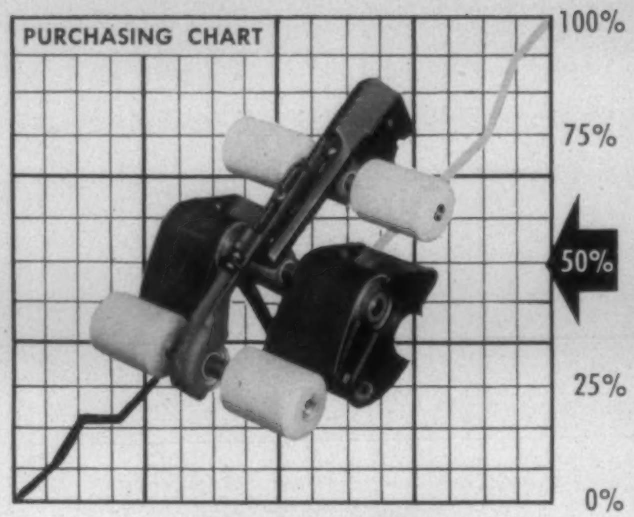

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A. E. Staley Completes 10-Story Plant Addition

The A. E. Staley Mfg. Co. of Decatur, Ill., has completed the installation of equipment in the new 10-story addition to its plant at Decatur. The expansion provides additional drying, blending, packing and loading facilities for oxidized and other modified starches. Use of the latest developments in starch processing equipment will offer these improvements in quality: (1) reduced contamination by other starches; (2) reduced impurities; (3) better starch color; (4) lower ash content; (5) increased uniformity; and (6) better dispersibility. The new installation makes full use of automation and other labor-saving equipment. Processing systems are operated by centrally-located panels, and electric interlock connections insure that components of the system are started or stopped in proper sequence. Similarly, automatic shut-offs and level controls provide for immediate stoppage in case of emergencies. The addition was designed and engineered by Staley engineers and technicians.

Courtaulds Announces Fabric Styling Service

Courtaulds (Alabama) Inc. has introduced a fabric styling service to demonstrate new patterns and color concepts for Coloray, the company's solution-dyed rayon staple. The styling is being done on hand looms, and Courtaulds reports that new interesting fabric ideas are resulting from these hand-loomed techniques and that hundreds of new stylings and color harmonies already have been developed for Coloray in the apparel and home furnishings fields.

Saco-Lowell Opens Repair Parts Depot At Easley

Saco-Lowell Shops has completed the moving of its Southern repair parts depot from Sanford, N. C., to Easley, S. C., where it is adjacent to the company's new plant now under construction. The better location, coupled with a completely reorganized and revised system of handling orders, will permit the repair sales division to give greater service to more customers, the firm points out.

The new depot is a modern, functional structure specifically designed for its purpose. There is a railroad siding on one side and a trucking platform on the other. Each type of part is stored in a specially constructed bin to afford the necessary protection and the greatest accessibility. A number of different style bins are used to fit the type of part and conserve space where possible.

One phase of the repair parts division's reorganization program was to thoroughly examine and investigate past practices of stocking in order to determine as realistically as possible the correct type and quantity of parts to store. The more functional design of the building itself and the more accurate system of stocking has made possible the moving of parts through the depot with a minimum of delay and a maximum of efficiency, the company reports.

A sales representative will be present at all times in the new depot to receive customers, answer their inquiries and to give special attention to urgent orders. Orders received are shipped immediately, if in supply, or they are otherwise teletyped to Biddeford, Me., for prompt action.

Hagan Corp. Changes Name, Merges with Subsidiaries

Hagan Corp. has changed its name to Hagan Chemicals & Controls Inc., effective Jan. 1. At the same time its subsidiaries, Calgon Inc., Hall Laboratories Inc. and The Buromin Co. were merged into the parent company. Calgon and Hall will continue as divisions. In announcing the change, W. W. Hopwood, Hagan president, said that the new name will better describe the company's activities in the fields of chemical engineering and automatic control equipment. The merger of the subsidiaries, he said, is expected to give the company some important tax advantages and operating economies.

Fletcher Offering Use Of Its Lab Facilities

Edward T. Taws, president of The Fletcher Works, Philadelphia, Pa., has announced the company will make available to any chemical or textile manufacturing firm its full laboratory facilities without charge.

"The laboratories of Fletcher's centrifugal, loom or yarn processing divisions," he said, "will be opened to all segments of these industries, during any business day, for testing purposes." The laboratory of Fletcher's newly-organized centrifugal division, Mr. Taws said, will be glad to test any material upon request. In order to utilize the Fletcher laboratories, throwsters or spinners can write to Mr. Taws to make all arrangements.

Production Under Way In New Solvay Plant

The new Brunswick, Ga., chlorine-caustic soda plant of Solvay Process Division, Allied Chemical & Dye Corp., is now in commercial production. The new installation represents the first step in Solvay's 2-part construction program at Brunswick. Liquid caustic soda (50% NaOH) will be available in both regular and rayon grades. While no dry forms of caustic soda are presently planned, 70 to 74% liquid will be available with completion of the second step in the Fall of 1957. Liquid chlorine will be shipped in standard single unit tank cars of 16, 30 and 55-ton capacity. Served by the Southern and Atlantic Coast Line railroads, the Solvay plant will also ship caustic soda by barge to consumers in the Southeast. In addition to its Brunswick plant, Solvay has chlorine-caustic soda facilities at Syracuse, N. Y., Baton Rouge, La., and Moundsville, W. Va.

Textured Yarn Co. Plans Expansion

Textured Yarn Co. Inc. of Philadelphia, Pa., producer of Tycora yarns, has announced a major program of expansion to be completed in 1957. The firm will add 2 new plants to enable it to nearly triple its present production of modified continuous filament fibers. The new facilities will permit the company to substantially increase production of yarns now in use in apparel and go into full production of Tycora yarns for the home furnishings fields.

Recently developed processes for modification of continuous filaments will be employed when production of yarns begins late in February at the firm's new plant in Elkton, Md. The types of yarn made in this plant will be similar to some already in use as well as others which will be introduced to the consumer market in the second half of 1957. Among these are yarns for woven fabrics, floor coverings and upholstery fabrics. Operations are planned for a 3-shift, 6-day week basis at the new Elkton plant in order to achieve maximum output. The fully air conditioned plant was acquired by Textured Yarn Co. through Frank G. Binswanger, industrial realtors representing Burlington Industries.

A second plant will be opened about the same time in Morovis, Puerto Rico, manufacturing Tycora yarns intended entirely for use in Puerto Rican markets.

Cook-P & N Machine Co. Moves, Changes Its Name

Cook-P & N Machine Co. Inc. of Boston, Mass., manufacturer of textile machinery, has moved to larger quarters in Nashua, N. H., and changed its name to Cook Machinery Co. Inc. The company was formerly on Dorchester Ave., Boston. The new address is Jackson St., P. O. Box 397, Nashua.

Textron Inc. Sells Hardy Brush Co.

Textron Inc. has announced the sale of its Hardy Brush Division, Andover, Mass., to Ira C. Foss of Wellesley Hills, Mass., and Frank K. Damrell of Arlington, Mass., executives of National Tag & Label Corp. and Seaboard Supply Co. of Watertown, Mass. The new management plans to continue operation of the business under the name Hardy Brush Corp. Hardy Brush has been a leader for more than 75 years in the industrial brush field, particularly specializing in brushes for the textile industry. Mr. Foss and Mr. Damrell have been serving the textile industry through National Tag & Label Corp. for the past 25 years.

Harris Research Labs Sold To Gillette Co.

Harris Research Laboratories Inc., Washington, D. C., specializing in research and development work in the textile field, has been acquired by the Gillette Co., manufacturer of safety razors and other related products. The research organization was founded some 12 years ago by Dr. Milton Harris, who for the past few years has also been director of research for Gillette. Gillette's plans for the firm have not been announced.

Burlington Forms Dyeing And Finishing Operation

Burlington Industries has announced formation of a new member company to engage in commission dyeing and finishing operations under the name of Burlington Finishing Corp. The new commission operations make available to the industry established capacity for finishing the many new fibers now in use, including all types of man-made fibers and blends with natural fibers. Three modern plants—Dublin (Va.) Finishing Co., Old Dominion Finishing Co. at Altavista, Va., and Greensboro (N. C.) Finishing Co.—give the new firm widely diversified facilities. The plants are equipped to handle dyeing and finishing of dress goods, lingerie, men's wear, automotive and virtually every type of woven fabric.

Sales office for Burlington Finishing Corp. is located in New York City at 1430 Broadway. The sales staff includes S. R. Smoak, Ernest H. Miller, William J. Ryan, Jack S. Hiller and Donald W. Miller. Officers of the corporation are: Frederick C. Wedler, president; Mr. Smoak and Ernest H. Miller, vice-presidents; and John E. Peterson Jr., secretary and treasurer. One of the 3 units in the new organization, Greensboro Finishing Co., has been operating as a commission plant since last August. Burlington Industries' own finishing requirements were lessened with the sale of its women's outer apparel converting divisions to Triplex in November, and thus the move into commission operations was made possible.

Electro-Motion Corp. Named Agent For Ultrasonics Firm

Electro-Motion Corp., 217 W. Morehead St., Charlotte, N. C., has been appointed sales representative in the South for ultrasonic equipment produced by Acoustica Associates Inc., Glenwood Landing, L. I., N. Y. Electro-Motion Corp., headed by John G. Swinney, will cover North and South Carolina, Georgia, eastern Tennessee and southern Virginia. Acoustica's "Silent Sound" ultrasonic devices are finding new applications daily in a variety of operations, including the scouring and dyeing of fabrics, treating wool to prevent shrinkage, and the cleaning and degreasing of metals. Acoustica was recently appointed U. S. distributor for ultrasonic equipment made by Mullard Overseas Ltd. of Great Britain.

Watts Mfg. Co. Acquired By Beckman Instruments

Watts Mfg. Co. Inc. of Ronceverte, W. Va., manufacturer of the Watts flaw detector, a photo-electric scanning device, has been acquired by Beckman Instruments Inc., Fullerton, Calif., which plans to continue the manufacture of the detector and other Watts products.

Southeastern Loom & Machine Works Now In New Quarters

Southeastern Loom & Machine Works, Greenwood, S. C., a division of Abney Mills, expects to have its new plant at Greenwood in full operation soon. The modern 1-story plant was completed last month by Daniel Construction Co. with the exception of the offices which are expected to be ready for occupancy by Feb. 1. The new plant is located adjacent to the Georgia & Florida Railroad on a tract of land containing sufficient acreage to provide ample parking for employees and also room for future plant expansion. The buildings consisting of foundry, machine shop, pattern shop, parts supply, shipping and assembly, and completely air conditioned offices includes approximately 138,000 sq. ft. of floor space.

The Sheffield Corp. Merges With Bendix Aviation Corp.

The Sheffield Corp. of Dayton, Ohio, manufacturer of a variety of instruments for the textile industry, has completed arrangements for a merger with the Bendix Aviation Corp., under which the business of the Sheffield Corp. will be continued as a wholly-owned subsidiary of Bendix. The management of Sheffield will remain the same, and no change in contracts, orders or related procedures will be made.

Morningstar, Nicol Inc. Opens New Jersey Plant

At cornerstone ceremonies on Dec. 22 Morningstar, Nicol Inc. dedicated new plant facilities in Hawthorne, N. J., which will triple its production potential and double its floor space in that city, give it the most modern set-up in the world today for the grinding, blending, treating and compounding of water soluble gums, and inaugurate the first air convection system for specialty starch and gum blending. The occasion also commemorated the 105th anniversary of the business (dating from the original Charles Morningstar operations) at the very site where the J. M. & J. S. Nicol operations began over 75 years ago. The merger occurred in 1929.

The new facility is the latest link in the 9-plant production network of Morningstar, Nicol and its industrial adhesives subsidiary, Paisley Products Inc., and was the last step in a 1956 expansion program involving more than a million dollars. Both the former Jersey City and Hawthorne activities will be combined in the new spread, and wholly devoted to the refining and processing of natural gums plus the production of specialty and treated starches and the dextrines made therefrom.

Brainard Steel Outlets In Charlotte & Atlanta

Combined sales offices and warehouse facilities for selling and servicing steel strap and accessories have recently been established in Charlotte and Atlanta by Brainard Steel Division of Sharon Steel Corp. Each office staffs a specially-trained sales engineer to provide experienced packaging assistance on customers' strapping problems. Both facilities offer a complete warehouse operation stocking Brainard steel strapping, seals, tools and accessories.

Brainard Steel Strapping was formerly distributed in these areas by Wrenn Brothers of Charlotte and Atlanta, distributors of materials handling equipment. However, the rapidly expanding market for Brainard Steel Strap necessititated the expansion of both sales facilities and stocks, requiring the full time attention of trained sales personnel and packaging engineers, Brainard points out.

The new sales offices and warehouses in Atlanta are located at 565 Western Ave., N. W. Sales engineer in this office is Joe Harrison. The new Charlotte facilities, under William G. Shelton, are located at 868 Tuckaseege Road.

Mead, Atlanta Paper Merge

The boards of directors of the Mead Corp., Dayton, Ohio, and Atlanta (Ga.) Paper Co. have approved an agreement providing for the affiliation of Atlanta Paper as a wholly-owned subsidiary of the Mead Corp., subject to approval of the shareholders of both companies.

Mead recently announced its increasing activity in the corrugated box manufacturing industry through acquisition of the remaining common stock of The Jackson Box Co. of Cincinnati, Ohio. Affiliation of Atlanta Paper Co. with Mead strengthens Mead's position in the paperboard industry by having large-scale converting operations in Atlanta, using Mead kraft liner board produced less than 100 miles away, at Macon and Rome, Ga. Mead is also extending its diversified line of paperboard products to include folding boxes, multiple unit packaging, and carry home cartons, a part of the box industry in which Atlanta Paper Co. holds a major position. This transaction will not affect Mead's service to its other customers.

By affiliating with Mead, Atlanta Paper Co. strengthens its position in the industry through Mead's greater research organization, an assured raw material supply, greater financial possibilities for future growth, and enlarged marketing potentials. The operations of the Atlanta Paper Co. will continue under the same name and management and under the same policies.

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TEXTILE BULLETIN is devoted to the dissemination of information and the exchange of opinion relative to the spinning and weaving phases of the textile industry, as well as the dyeing and finishing of yarns and woven fabrics. Appropriate material, technical and otherwise, is solicited and paid for at regular rates. Opinions expressed by contributors are theirs and not necessarily those of the editors and publishers. ¶ Circulation rates are: one year payable in advance, $1.50; two years payable in advance, $2.00; one year, Canada, $3.00; one year, other countries in Postal Union, $5.00; single copies, 25 cents. ¶ A companion monthly journal, THE KNITTER, is published by Clark Publishing Co. and devoted to the interests of the knitgoods manufacturing industry.

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Late, New Entries In The Dizzy Fiber Derby

The full potentialities naturally cannot be even dimly evaluated at this early stage, but one of the most intriguing areas to appear on the textile research horizon involves the possibility of synthetic protein fibers. The reports are that several very large companies are interested in researching this field.

It is well-known, of course, that one of the more important of the man-made fibers to be developed in the postwar period, Vicara, is made from zein, a protein of the rather surprisingly versatile corn kernel. But zein, which also has some other rather important industrial uses and applications, is a natural protein.

The area now under early research, which could mean a whole new family of synthetic or man-made fibers, involves the making of synthetic protein fibers which would be formed from long chains of amino acids. Such, as of now, is in what might be called a very early research stage; but the idea has already aroused the interest of some of the top chemists.

This new scientific vista begins to open up at a time when the whole field of the non-cellulosic fiber—and the spectrum is an ever-widening one—might be said to be in a developmental stage; that is, researchers are constantly experimenting with procedures by which they can change or improve the physical and chemical characteristics of the acrylic, vinyl and other test tube fibers.

Yet even while so much research work of this type is under way, the production facilities for the non-cellulosic fibers, particularly the acrylics and nylons, are now being expanded tremendously again, after having reached a sort of plateau during the last year or so. And the actual number of these man-made or chemical fibers is multiplying so fast the day may not be too distant when the consumer willl find it convenient to carry a pocket dictionary of synthetic fibers and fabrics and blends.

Still, these new fibers are not developed or put into large-scale commercial production hastily. It required some $27 million, the combined work of over 300 chemists and years of painstaking research before Du Pont made the first commercial run of nylon, the first real synthetic, back in 1939.

Again, ten years of research and pilot plant development preceded the decision of American Cyanamid Co. to build near Pensacola, Fla., a huge facility, expected to be ready in mid-1958, for full-scale commercial production of its acrylic fiber, Creslan.

And five years of research preceded announcement by Dow Chemical Co. recently that it has perfected a man-made fiber it named Zefran and which it plans to manufacture at a large plant to be built near Lee Hall, Va., on the James River. A company spokesman has said that this new synthetic fiber can probably best be described as being in the category of a nitrile alloy.

It is interesting to note that, following nylon, of course, Du Pont's first man-made fiber to go into large-scale commercial production was the acrylic, Orlon. The company's first plant for Orlon staple began production at Camden, S. C., in mid-1952. Now Du Pont is starting to build a new Orlon plant at Waynesboro, Va., scheduled for completion late in 1957. Rated at 40 million pounds annually, the plant will bring Du Pont's total capacity for Orlon staple and tow to above 100 million pounds a year.

Actually nylon, the productive capacity for which is now being tremendously increased, was the first synthetic only from the standpoint of introduction or commercial availability. In basic chemistry another Du Pont fiber, Dacron, the polyester, is actually older. It is the outgrowth of the research of Dr. Wallace Carothers, who worked on polyesters before he turned his genius to polyamides and the discovery of nylon. Commercial production of Dacron, first produced experimentally under the name of Fiber V, did not start until 1953 when Du Pont completed its productive facility at Kinston, N. C.

Now the fiber derby becomes more intriguing to watch as the late entries line up. And from the great number of nonacrylic and other synthetic fibers now in the experimental stage, and with undoubtedly still more yet to emerge from the test tubes, the race can be expected to become even more interesting at some hypothetical post time in the indefinite future.

Japan Fast Stepping Up Its Productivity

In view of U. S. State Department policy and the grave injury which an unprecedented spiral of Japanese cotton goods imports has already inflicted upon U. S. mills, and especially in view of just-announced agreement between the United States and Japanese governments for a limitation of Nipponese exports to this country (see Page 65), it is interesting to note that recent news dispatches tell of Japanese industry reporting big production gains as a result of greater efficiency.

A Reuters (British) dispatch from Tokyo early in December, for instance, says that this greatly stepped-up productivity is attributed by Japanese industry to American know-how brought back by Japanese teams which have visited the United States to learn more modern methods. The Productivity Center, which is the name of an agency supported by the Japanese Government, has since its formation sent more than 30 productivity teams to the United States to study, according to the Reuters dispatch.

The Japanese textile industry is one field which has shown phenomenal production increases recently. But the news dispatch points out that Japan's trade union movement remains somewhat suspicious of the whole productivity promotion movement. For instance, the 3,000,000 workers affiliated with the General Council of Japanese Trade Unions (Sohyo) actually are strongly opposed to the idea, according to the Tokyo advices.

Their argument is that the Conservative government is seeking with the active collaboration of the United States, "further to subjugate the working class . . . in the interest of Japanese monopolistic capitalists." Led by Tadashi Adachi, president of Radio Tokyo and a leading businessmen, the center has denied Sohyo's allegations and recently began a nationwide publicity campaign to popularize the center's activities among Japanese businessmen and industrialists.

According to Mr. Adachi, the center has three basic principles: (1) Increased production leading to increased employment; (2) methods of increasing production must be studied jointly by labor and management; and (3) the results of increased productivity must be fairly shared by labor, management and consumers.

Mr. Adachi said that during its 18 months of existence, the center had made considerable progress both in its drive to increase productivity in Japan and in overcoming the suspicions of Japanese trade union leaders.

During the last few months, he added, the Japanese Trade Union Congress (Zenro), which has a membership of some 620,000 workers, has contributed to the center's aims and both the center and the congress are collaborating closely.

The Reuters dispatch relates that each productivity team the center sends to the United States is drawn from some particular section of industry and spends from four to six weeks in the United States studying and inspecting one particular subject. Most of the teams include businessmen and industrialists but more emphasis now is being placed on teams of management specialists, engineers and trade unionists.

Susumu Murota, head of the center's international department, said that on returning from the United States, each member returns to his own organization to begin putting into practice what he has studied during his tour. He is also bound, by the conditions of the center, to inaugurate a local chapter of the Productivity Center and Mr. Murota reports that many of the industries which have studied new productivity methods under the center's auspices have greatly increased their production.

Needless to say, the information the Tokyo dispatches provide is interesting and enlightening indeed when it is weighed and considered as one more facet to an over-all situation which has so damaged the U. S. cotton goods industry, has caused some domestic mills to close, others to drastically cut back production, and still others even to cancel or hold in abeyance previously announced large expansion and modernization programs.

Carpet Industry Continues Trek to Dixie

The last part of the year just closed witnessed an acceleration in the slowly developing trend of the old-line carpet industry to relocate and expand in the Southeast. And the trend parallels, yet is separate from, the tendency in recent years of many of the old-line companies in the East to meet the growing threat from tufted carpet manufacturers, centered in Dixie from the beginning, by acquiring Southern plants, expanding them usually, and making these lines themselves.

Several states in the Southeast are fast becoming important centers of woven carpet output. Among the more recent developments, Firth Carpet Co., which operates three mills in New York State and a jute and wool mill in Puerto Rico, has signed a long-term lease on a plant built at Burnsville, N. C., a few years ago by Duplan Corp. at a cost of $2.3 million, and plans to begin full-scale operations there by next Autumn. Firth's products consist of Axminster, Wilton, chenille, velvet frieze and tuftwoven, and it has recently announced that it will go into large-scale production of carpets made entirely from a special type of Acrilan, one of the acrylic fibers.

In 1956 Bigelow-Sanford Carpet Co. selected Landrum, S. C., as the location for a new Southern manufacturing division. It has built 270,000-square foot Landrum Mills to manufacture its line of velvet carpets. Bigelow-Sanford has also recently enlarged its yarn mill at Bristol, Va., established a new yarn manufacturing operation at Belton, S. C., and has started construction of a new yarn mill at Calhoun Falls, S. C., expected to be completed next Summer.

James Lees & Sons Co. was the first old-line Eastern carpet manufacturer to establish a wool carpet operation in the South when it acquired a mill in Virginia several years ago. Late in 1956 a newly-formed James Lees & Sons Co. subsidiary, Fontana Mills, purchased a plant location at Robbinsville, N. C., where it plans to erect a new Wilton-velvet carpet weaving plant. This plant will be in addition to the Wilton-velvet production facilities at the company's Glasgow, Va., plant. James Lees & Sons Co. announced recently its capital spending in 1957 will be about $9 million, bringing its post-war total for new plants and improvements to over $38 million.

In a few years, relatively, Alexander Smith Inc., has become primarily a Southern operator. It started its Dixie operations by building probably the industry's finest carpet plant in Greenville, Miss., which is farther south and farther west than any other major carpet plant in the nation. This huge plant turns out wool Axminster carpets in the heart of the rich Delta cotton country in a completely integrated operation. A year later Alexander Smith, now a part of Mohasco Industries Inc., closed out operations in its big Yonkers, N. Y., plant which officials said could no longer be operated economically, and subsequently acquired in Liberty, S. C., a large post-war textile plant which it expanded and converted to the weaving and finishing of velvet carpets.

Oak River Mills, a subsidiary of Mohasco, is now planning to build a one-story 150,000 square foot plant at Bennettsville, S. C.

Art Loom Carpet Co. of Philadelphia decided to build a Southern carpet plant in Effingham, S. C., in Florence County—the same county where the South's first wool combing plant was built only a few years ago. Art Loom has been operating a large weaving operation in Philadelphia, and makes wool Wilton and Axminster rugs and carpets and also cotton and rayon broadloom carpets. Greenville Mills Inc., a subsidiary, manufactures woolen carpet yarns at Greenville, N. C.

These are some of the high spots in the developing picture. One thing, of course, that has emerged as a factor was the building of the Southeast's first two wool combing or top-making plants in the eastern part of South Carolina about two years ago. Another factor, too, undoubtedly has been the promotional and advertising campaign of the carpet industry.

TEXTILE INDUSTRY SCHEDULE

— 1957 —

*Jan. 26 (Sa)—**PIEDMONT SEC., A.A.T.C.C.**, Poinsett Hotel, Greenville, S. C.

Jan. 28-29 (M-Tu)—Annual meeting, **NATIONAL COTTON COUNCIL OF AMERICA**, St. Louis, Mo.

Jan. 28-31 (M-Th)—**PLANT MAINTENANCE & ENGINEERING SHOW**, Cleveland (Ohio) Public Auditorium.

*Feb. 22 (F)—**SOUTHEASTERN SEC., A.A.T.C.C.**, Pepperell, Ala.

Feb. 25-27 (M-W)—**GEORGIA SEC., AMERICAN SOCIETY FOR QUALITY CONTROL**, Georgia Institute of Technology, Atlanta, Ga.

Feb. 25-Mar. 1 (M-F)—**INTERNATIONAL HEATING & AIR CONDITIONING EXPOSITION** (sponsored by American Society of Heating and Air Conditioning Engineers), International Amphitheatre, Chicago, Ill.

Feb. 27-Mar. 1 (W-F)—**COTTON RESEARCH CLINIC** (sponsored by National Cotton Council), General Oglethorpe Hotel, Savannah, Ga.

Mar. 11-13 (M-W)—Spring meeting, **NATIONAL COUNCIL FOR TEXTILE EDUCATION**, Wilmington, Del.

Mar. 14-15 (Th-F)—**SOUTHERN TEXTILE METHODS & STANDARDS ASSN.**, Clemson House, Clemson, S. C.

Mar. 14-15 (Th-F)—Annual meeting, **TEXTILE RESEARCH INSTITUTE**, Hotel Commodore, New York City.

*Mar. 19-22 (Tu-F)—**COMMITTEE D-13, AMERICAN SOCIETY FOR TESTING MATERIALS**, New York City.

Mar. 28-29 (Th-F)—**TEXTILE QUALITY CONTROL ASSN.**, Clemson House, Clemson, S. C.

*Mar. 30 (Sa)—**PIEDMONT SEC., A.A.T.C.C.**, Roanoke Hotel, Roanoke, Va.

Apr. 4-6 (Th-Sa)—Annual convention, **AMERICAN COTTON MFRS. INSTITUTE, Palm Beach Biltmore Hotel, Palm Beach, Fla.**

‡Apr. 6 (Sa)—**EASTERN CAROLINA DIV., S.T.A.**, Raleigh, N. C.

Apr. 9-11 (Tu-Th)—**NATIONAL PACKAGING CONFERENCE AND EXPOSITION (sponsored by American Management Assn.), International Amphitheatre, Chicago, Ill.**

Apr. 10-12 (Th-Sa)—Annual meeting, **ALABAMA COTTON MFRS. ASSN.**, Buena Vista Hotel, Biloxi, Miss.

*Apr. 13 (Sa)—**SOUTHEASTERN SEC., A.A.T.C.C.**, Lindale, Ga.

*Apr. 13 (Sa)—**NORTHERN NORTH CAROLINA-VIRGINIA DIV., S.T.A.** (Dan River Mills as host), Danville, Va.

Apr. 24-25 (W-Th)—Open House, A.C.M.I. Cotton Fiber Testing Laboratory, The Clemson House, Clemson, S. C.

‡Apr. 25 or 26 (Th or F)—**SOUTH CAROLINA DIV., S.T.A.**

Apr. 29-May 3 (M-F)—**MATERIALS HANDLING EXPOSITION** (concurrent with conference of American Material Handling Society), Convention Hall, Philadelphia, Pa.

May 1-2 (W-Th)—Spring meeting, **THE FIBER SOCIETY**, Clemson House, Clemson, S. C.

May 1-4 (W-Sa)—Annual convention, **COTTON MFRS. ASSN. OF GEORGIA**, Emerald Beach Hotel, Nassau, Bahamas.

*May 4 (Sa)—**PIEDMONT DIV., S.T.A.**, Catawba Country Club, Hickory, N. C.

May 9-11 (Th-Sa)—**NORTH CAROLINA INDUSTRIAL SAFETY CONFERENCE**, Robert E. Lee Hotel, Winston-Salem, N. C.

May 16-18 (Th-Sa)—Outing, **CAROLINA YARN ASSN.**, The Carolina, Pinehurst, N. C.

May 20-25 (M-Sa)—NATIONAL COTTON WEEK (sponsored by National Cotton Council of America).

*May 30-June 1 (Th-Sa)—Annual meeting, **SOUTH CAROLINA TEXTILE MFRS. ASSN.**, The Cloister, Sea Island, Ga.

*June 6-8 (Th-Sa)—Annual outing, **SOUTHEASTERN SEC., A.A.T.C.C.**, Radium Springs, Ga.

*June 7-9 (F-Su)—Annual outing, **PIEDMONT SEC., A.A.T.C.C.**, Mayview Manor, Blowing Rock, N. C.

June 20-22 (Th-Sa)—Annual convention, SOUTHERN TEXTILE ASSN., Ocean Forest Hotel, Myrtle Beach, S. C.

Sept. 4-6 (W-F)—Fall meeting, **THE FIBER SOCIETY** (joint meeting with British Textile Institute), Statler Hotel, Boston, Mass.

Sept. 12-13 (Th-F)—Annual meeting, **CARDED YARN ASSN.**, The Cloister, Sea Island, Ga.

*Sept. 14 (Sa)—**SOUTHEASTERN SEC., A.A.T.C.C.**, Columbus, Ga.

Sept. 27-28 (F-Sa)—**COMBED YARN SPINNERS ASSN.**, The Cloister, Sea Island, Ga.

*Sept. 28 (Sa)—**PIEDMONT SEC., A.A.T.C.C.**, Hotel Barringer, Charlotte, N. C.

Oct. 2-3 (W-Th)—**CHEMICAL FINISHING CONFERENCE** (sponsored by National Cotton Council), Hotel Statler, Washington, D. C.

Nov. 14-16 (Th-Sa)—National convention, **AMERICAN ASSN. of TEXTILE CHEMISTS & COLORISTS**, Hotel Statler, Boston, Mass.

*Dec. 7 (Sa)—**SOUTHEASTERN SEC., A.A.T.C.C.**, Atlanta, Ga.

— 1958 —

Jan. 27-28 (M-Tu)—Annual meeting, **NATIONAL COTTON COUNCIL OF AMERICA, Phoenix, Ariz.**

Apr. 10-12 (Th-Sa)—Annual convention, AMERICAN COTTON MFRS. INSTITUTE, Hollywood Beach Hotel, Hollywood, Fla.

May 26-29 (M-Th)—**NATIONAL PACKAGING CONFERENCE AND EXPOSITION (sponsored by American Management Assn.), New York Coliseum, New York City.**

June 19-21 (Th-Sa)—Annual convention, **SOUTHERN TEXTILE ASSN., The Grove Park, Asheville, N. C.**

*Oct. 6-10 (M-F)—**SOUTHERN TEXTILE EXPOSITION**, Textile Hall, Greenville, S. C.

‡Fall—National convention, AMERICAN ASSN. OF TEXTILE CHEMISTS & COLORISTS, Conrad Hilton Hotel, Chicago, Ill.

(M) Monday; (Tu) Tuesday; (W) Wednesday; (Th) Thursday; (F) Friday; (Sa) Saturday; (Su) Sunday

****Listed for the first time this month.*** ***‡Tentative listing.*** ***†Changed or corrected from previous issue.***

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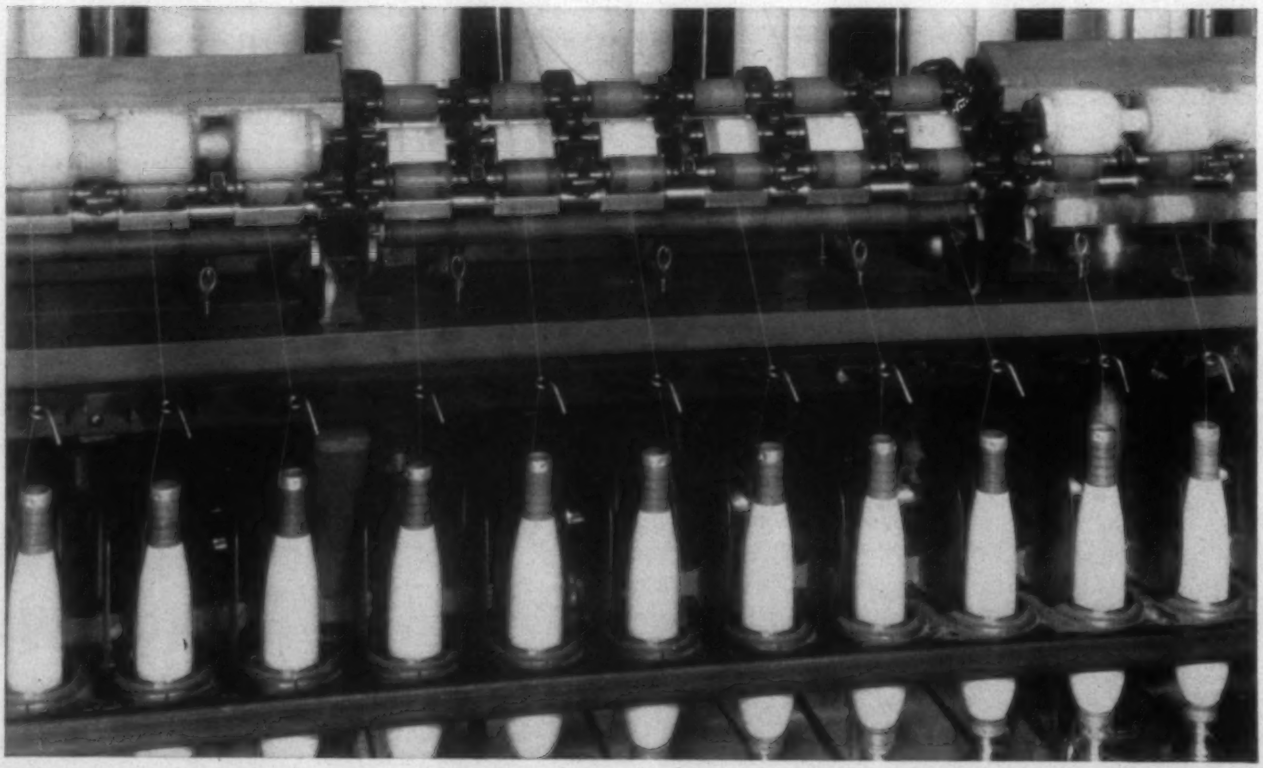

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textile bulletin

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The New Japanese Export Program

On Dec. 21, 1955, the Japanese Government announced a program for the voluntary control of cotton goods to the U. S. in 1956. On May 16, 1956, Japan advised the U. S. officially of the details of the program and of its intention to exercise similar controls for 1957. On Sept. 27, 1956, the U. S. was advised as to the principles on which Japan intended to base its control of cotton textile exports for 1957 and subsequent years. Details of this program were announced Jan. 16. Effective Jan. 1, 1957, the controls are to extend for five years, subject to an annual review by representatives of both the Japanese and U. S. governments.

The Japanese Government announced Jan. 16 a voluntary program for the control of exports of cotton textiles to the U. S. The program, effective as of Jan. 1, 1957, has a five-year duration, subject to annual review. It places an annual over-all ceiling of 235 million square yards on the export of all types of Japanese cotton cloth and cotton manufactures to this country, with specific ceilings on many items.

Within the over-all ceiling of 235 million square yards, the limit for cotton has been set at 113 million square yards; the limits for woven and knit apparel total 83 million yards; and the limits for household goods and miscellaneous items total 39 million yards.

The cotton cloth ceiling of 113 million square yards compares with a ceiling of 150 million square yards in 1956. Individual ceilings are specified for velveteens, ginghams and high-grade (combed) cotton fabrics. The export limit for velveteen is 2.5 million square yards for each of the first two years. The export limit for gingham is 35 million square yards for each of the first two years. With respect to the remaining 75.5 million yards for "all other fabrics," a limit for high-grade (combed) cotton fabrics of 26 million square yards is established.

In other groups covering cotton make-up goods, individual annual ceilings have been established for pillowcases, dish towels, handkerchiefs, table damask, blouses, sport shirts, dress and work shirts, brassieres and other body supporting garments, men's and boys' T-shirts, and gloves and mittens.

The program also provides for Japanese cotton textile exports to this country to be distributed equally by quarters as far as practicable and as necessary to meet seasonal demands. The Japanese Government will also take all feasible steps to prevent trans-shipments to the U. S. through third countries.

The Japanese program is the result of a long series of conferences between representatives of the U. S. and Japanese governments, and it has been developed in an effort to meet the problems which arose in 1955 when exports of Japanese textiles to the U. S. increased sharply. These exports were heavily concentrated with respect to certain commodities such as blouses, velveteens and ginghams. Not only were the domestic producers of these items affected, but the entire textile industry felt the brunt of the impact on the price structure of the industry and the uncertainty as to where other concentration of Japanese exports might hit.

In announcing the details of the program, the Japanese Textile Export Council in Tokyo, composed of government officials and textile company representatives, warned the U. S. that the controls are based on the condition that the U. S. Government would take all "feasible steps to solve the problem of discriminatory state textile legislation and to prevent further restrictive action with regard to the importation of Japanese textiles into the U. S."

What assurances the U. S. Government gave the Japanese council that such steps will be taken is not known. The South Carolina House of Representatives, at the time the Japanese program was announced, was presented a bill that would impose heavy taxes on both wholesalers and retailers of cloth and garments manufactured in Japan. What will be the responsibility of the U. S. Government under the new control program if this bill passes the South Carolina House? The bill may be shelved, but its author, reminded that a similar bill boggd down in the Ways and Means Committee last year, said he did not have "the slightest doubt that it will go through this time."

Significantly perhaps, the announcement of the Japanese program by the U. S. Commerce Department made no mention of the restrictions or conditions called for by the Japanese Textile Export Council. Queried on this point by newspapermen at Charlotte, N. C., where he attended a meeting of the board of the American Cotton Manufacturers Institute on Jan. 16, Assistant Commerce Secretary H. C. McClellan said the field of legislation was not under the jurisdiction of the Commerce Department. Also attending the A.C.M.I. board meeting was Commerce Secretary Sinclair Weeks.

Outline Of New Program

The following outline of the new Japanese export control program was released Jan. 16 by the U. S. Department of Commerce with the announcement of the five-year plan.

(1) The purpose of this program is to effect orderly marketing of Japanese cotton textiles in the United States

by avoiding excessive concentration in any particular period or on any particular item, and by continued efforts to achieve broader diversification of cotton textile exports from Japan to the United States.

(2) To achieve this purpose the program shall be of five years' duration, beginning Jan. 1, 1957. Throughout this period, there shall be an over-all ceiling, as well as ceilings on major groups and within these groups, ceilings on certain categories of cotton textile products. Anticipating that changes may well occur in the United States textile market within the next five years, these ceilings shall be the subject of annual reviews in which the Japanese Government will consult with the United States Government for the purpose of arriving at such adjustments, upward or downward, in the quotas as may be warranted by changed conditions.

(3) All feasible steps shall be taken by the Japanese Government to prevent trans-shipment to the United States through third countries.

(4) Wherever a specific ceiling has been established the basis for control will be the number of units (e.g., square yards, dozens, pieces, pounds, dollars, etc.) established as a ceiling. The conversion into equivalent square yards is for the purpose of providing a common statistical basis for measurement of the over-all program. Wherever pounds are mentioned the conversion shall be at the rate of 4.6 square yards per pound.

(5) Exports from Japan to the United States of particular items shall be distributed equally by quarters as far as practicable and as necessary to meet seasonal demands.

(6) The over-all limit for Japanese exports of cotton textiles to the United States shall be 235 million square yards each year for the duration of the program, subject to change only through consultation which takes into account all factors relevant at the time of consultation.

(7) The over-all limit shall be subdivided into five major groups as follows:

	Million Square Yards
Group I—Cotton Cloth	113
II—Made-up goods, usually included in U. S. Cotton Broad Woven Goods Production	30
III—Woven Apparel	71
IV—Knitgoods	12
V—Miscellaneous Cotton Textiles	9
Total	235

(8) Within the over-all annual total, the limit for any group may be exceeded by not more than ten per cent.

(9) The following limits shall be applicable within the total of 113 million square yards for Group I—"Cotton Cloth":

	Million Square Yards
(1) Ginghams	35.0
(2) Velveteens	2.5
(3) All Other Fabrics	75.5

Within the total of 75.5 million square yards for Item 3, "All Other Fabrics," the following specific limits shall not be exceeded:

	Million Square Yards
(a) Sheeting	50
(b) Shirting (80 x 80 type)	20
(c) Other Shirting	43
(d) Twill and Sateen	39
(e) Poplin	25
(f) Yarn Dyed Fabrics	24
(g) Other Fabrics	44

A.C.M.I. Evaluation

Speaking for the board of directors of the American Cotton Manufacturers Institute, F. E. Grier, A.C.M.I. president, had this to say about the Japanese program:

"It is our considered opinion that the plan, if adequately enforced, is basically sound and workable and that it should dissolve promptly the cloud of doubt and uncertainty which has disrupted U. S. cotton textile markets for almost two years, and which has threatened the future of U. S. cotton in the American market. We believe the plan deserves a firm trial.

"We have been assured that both the U. S. and Japanese governments will keep careful records of performance. This will give both governments a further check on effectiveness of the plan. It is logical that the Japanese exporters will also benefit from more orderly marketing conditions in this country.

"Our government, in welcoming the new Japanese control program, has recognized that only quantitative limitations can effectively deal with imports in cotton textiles manufactured overseas from 25 per cent cheaper cotton by a labor force that is paid one-tenth the American wage rate. As Governor Sherman Adams said last September in announcing the first stage of the Japanese control program: 'With us it is traditional to welcome fair and equitable competition. All we have asked is that the rules are the same for all competitors. When they differ, then it is proper that government take a hand in maintaining the equity.' The detailed plan announced today (Jan. 16) is in the spirit of Governor Adams' statement.

"We especially commend him, Secretary of Commerce Sinclair Weeks and Assistant Secretary H. C. McClellan for their determined efforts to conclude the project on a workable basis.

"The plan . . . involves an over-all limitation on shipments to the U. S. of cotton fabric, apparel and other manufactured items. It provides further for a breakdown of the exports into a number of categories of fabric and manufactured items, to avoid excessive concentration on any particular product. Also, the arrangement involves what we consider to be additional safeguards relating to a five-year duration, continuing supervision and definite procedures to deal with unanticipated concentrations.

"Establishing as it does the principles of diversification and avoidance of concentration against particular cotton products, the new program should be able to prevent sharp import damage to segments of the American industry such as has been inflicted on U. S. velveteen and gingham producers. While shipments of velveteens and ginghams will still be disproportionately heavy in the next two years, the Japanese have announced that they will sharply cut back their exports of these items from past levels immediately and will, we hope, further reduce their shipments of these two types of cloth thereafter."

(10) The following additional provisions are applicable to the cloth distribution in paragraph 9: (A) The limits for ginghams and velveteens shall apply for each of the first and second years of the program. The limits for subsequent years shall be determined through consultation taking into account all factors relevant at the time of such consultation. (B) Within the 75.5 million square yards for fabrics other than ginghams and velveteens, i.e., categories (a) to (g) inclusive, the total exports of fabrics made from combed warp and filling shall not exceed 26 million square yards. (C) Within the over-all total for Group I, any shortfall with respect to ginghams or velveteens may be transferred to Item 3—"All Other Fabrics," subject, however, to the provisions of paragraph 18 below.

(11) The following specific limits shall apply within the total for Group II—"Made-up goods usually included in U. S. Cotton Broad Woven Production:"

	Unit	No.
(1) Pillowcase (plain)	000 doz.	400
(2) Dish Towels	000 doz.	800
(3) Handkerchief	000 doz.	1,200
(4) Table Damask	000 dollars	3,720*
(5) Other Items	000 lbs.	1,875

*This is estimated at present prices to represent about 468,000 dozen sets, and conversion to yardage is in terms of the standard 50 inches by 50 inches.

(12) Within the over-all total for Group II, any shortfall with respect to the listed items may be transferred to the "Other Items" category, subject, however, to the provisions of paragraph 18 below.

(13) The following specific limits shall apply within the total for Group III—"Woven Apparel:"

	Unit	No.
(1) Blouses	000 doz.	1,500
(2) Sport Shirts	000 doz.	750
(3) Dress and Work Shirts	000 doz.	300
(4) Brassieres and Other Body Supporting Garments	000 doz.	600
(5) Shorts and Trousers	000 doz.	600
(6) Other Woven Apparel	000 lbs.	2,321

(14) Within the over-all total for Group III, any shortfall with respect to the listed items may be transferred to the "Other Woven Apparel" category, subject, however, to the provisions of paragraph 18 below.

(15) The following specific limits shall apply within the total for Group IV—"Knitgoods:"

	Unit	No.
(1) Men's and Boys' T-shirts (short-sleeve, white, no button, no collar, usually round neck, sometimes V-neck, commonly called "Maru-kubi" shirt in Japan)	000 doz.	500
(2) Gloves and Mittens	000 doz.	450
(3) Other Knitgoods	000 lbs.	1,477

(16) Within the over-all total for Group IV, any shortfall with respect to the listed items may be transferred to the "Other Knitgoods" category, subject, however, to the provisions of paragraph 18 below.

(17) Within the over-all total for Group V are included, among others, such items as cotton floor coverings, fish nets and netting, cotton thread, etc. Although no specific limits are established within Group V, exports shall be subject to the provisions of paragraph 18 below.

(18) In order to preserve the principle of diversification and avoid excessive concentration on any particular item, it is understood, with respect to any item for which a specific ceiling has not been established, that the Japanese Government will consult with the United States Government to determine an appropriate course of action, whenever it appears that there is developing an excessive concentration of Japanese exports in a particular item or class of items, or if there are other problems (e.g., possible problems resulting from an excessive concentration of exports of end items made from a particular type of fabric, such as the use of gingham in the manufacture of an excessively large portion of exported blouses, sport shirts, etc.)

Miss Wade, Maid Landon, Miss Deason

THE 1957 MAID OF COTTON, a 20-year-old beauty with an appealing personality, is Miss Helen Landon of Huntingdon, Tenn., who captured the coveted title Dec. 28 in competition with 22 other finalists from throughout the Cotton Belt. Now a student at the University of Tennessee, Maid Helen is five feet 8½ inches tall and has blue-green eyes. King Cotton's new fashion and goodwill ambassador is the daughter of Mrs. Louise Landon of Huntingdon and Maj.-Gen. T. H. Landon, commanding general of the Air Force in the Caribbean Area. A student majoring in business administration, Maid Helen is studying retailing and aiming at a career in merchandising.

Named as first alternate Maid of Cotton was Jo Ann Deason, Enoree, S. C. Jo Ann, who also is blonde, is the daughter of Mr. and Mrs. W. H. Deason. She attended Winthrop College and now is a graduate student at the University of North Carolina. She is 22 years old, five feet 7¼ inches tall, and is the current South Carolina Maid of Cotton.

Another Tennessean, Sally Wade of Kenton, is second alternate to Maid Helen. The daughter of Mr. and Mrs. Tom W. Wade, Sally has brown hair and eyes. She is 20 years old, five feet 5¾ inches tall, and is now a senior at Bennett Junior College, Millbrook, N. Y. Mr. Wade is in the cotton ginning business.

The American Cotton Importers Association will hold its 1957 convention in Charleston, S. C., in May, marking the first time the association has ever held its annual meeting outside of Boston or New York, according to Cotesworth P. Means of Charleston, chairman of the South Carolina State Ports Authority, who noted that for the past six years Charleston has been the leading port in the nation in imports of foreign long-staple cotton.

Laurinburg an 'All-America' City, Not a Burg Because of Some Hustle by Textile People

By RICHARD L. GORRELL, Textile Information Service

Dick Gorrell, one of the newest staff members of the A.C.M.I. Textile Information Service, found a gold mine of individual and industrial good citizenship on a visit to a Scottish community in North Carolina.

LAURINBURG, N. C., is a small textile city rooted near the South Carolina border where the line swoops southeastward to the sea. Its inhabitants, predominantly of Scottish ancestry, are about 100 miles from the important cities of the Carolinas. To the east lies Wilmington, a bustling seaport. The commercial heart of the two states, Charlotte, lies to the west. Raleigh, North Carolina's seat of government, is to the north. The capital of South Carolina, Columbia, is to the south.

But this community of 9,000 is strutting before the envious glances of its larger neighbors. Laurinburg is an All-America city, the only Southern city to be so named this year. And it was the smallest city selected by the National Municipal League and *Look Magazine*.

Laurinburg's glory reflects directly on the textile industry because it rests on the same economic base as many another Southern town. Its principle industry is textiles. Its main agricultural crop is cotton. And it was leadership from the textile industry that helped make Laurinburg an All-America city.

Laurinburg's 2,900 textile employees and the executives of its mills showed the world that they were able and willing to do more than their share in making Laurinburg a better place to live. The result was the All-America designation.

That designation was based on the miracle of Laurinburg—the miracle of giving. The residents of Laurinburg and Scotland County don't look on their contributions as miraculous, but they will admit they were astounded. The reason for their astonishment can be seen in the four projects that brought them the All-America honors:

(1) The campaign which raised over three million dollars and resulted in the Consolidated Presbyterian College being located in Laurinburg.

(2) A $208,000 addition to Scotland County Memorial Hospital.

(3) A $40,000 swimming pool.

(4) An 82-unit low-rent housing program, which included extension of a slum-clearance project started some years ago.

All of the three million dollars collected in the college drive, the swimming pool money and $87,000 of the hospital fund was collected from the 9,000 residents of Laurinburg and the 27,000 inhabitants of Scotland County.

A miracle? Perhaps not in the strict sense, but let Ralph D. Sanders, vice-president and treasurer of Morgan Cotton Mills Inc., the man who headed the drive for the college funds, give you his explanation of why his committee was able to collect three million dollars from this textile manufacturing and cotton growing area. Says Mr. Sanders:

"We were astounded at the way everybody gave. Why, some—many—of the people here gave not just a tenth of their income but a tenth of their net worth.

"I think we all felt that we had been building a community for Christian service for a long time. Then, when the college project came along, we knew that it was our opportunity to give that service. The people gave and gave and gave."

Laurinburg's textile industry was an example of the giving. The 2,900 mill employees (there are 3,300 manufacturing employees in the area) contributed $110,000. The mills themselves and mill executives put in more than $850,000. All told, the amount was about 30 per cent of the three million dollars.

Halbert M. Jones, president of Waverly Mills Inc., a leader in the drive for the hospital addition and the swim-

Jones, Morgan, Sanders

These three Laurinburg, N. C., textile leaders were instrumental in each of four projects that recently brought the city All-America honors. They are standing in front of Scotland Memorial Hospital, an addition to which was one of the projects. Pictured are: Halbert M. Jones, president of Waverly Mills Inc.; Edwin Morgan, president of Morgan Cotton Mills Inc.; and R. D. Sanders, vice-president and treasurer of Morgan Cotton Mills.

ming pool, had another explanation. Mr. Jones, a vice-president of the American Cotton Manufacturers Institute and the North Carolina Textile Manufacturers Association, summed it up this way in his presentation at Memphis, Tenn., to the committee that made Laurinburg one of the 11 All-America cities:

"The accomplishments and community betterments in Laurinburg are the results of the highly-organized activities of dedicated citizens, who, through the years, have demonstrated their willingness and ability to co-operate and support sacrificially worthy projects for the improvement of the community. These funds contributed by private citizens to community capital improvement programs have resulted in obtaining facilities at a net cost to the citizenship of 40 to 50 per cent less than the total cost involved if such funds had been provided by local city bond issues."

Each explanation tends to lead back to the Scottish Highlanders who founded Laurinburg and Scotland County and their dedication to church and education. Their lingering influence is evidenced by the splendid donations made by Laurinburgers today for health, educational and recreational facilities. Yet, their city government is situated in an old Laurinburg home.

The Scots came to this southeastern area of North Carolina as early as 1729. By the 1860s Laurinburg had become a railroad center, the home of the Seaboard shops. Later, the shops were moved to Hamlet, N. C., and the textile industry got its start.

Edwin Morgan, president of Morgan Cotton Mills Inc. and Scotland Mills Inc., recalled the hand-me-down story of the industry's beginning here.

It started, he said, during the Civil War after General Sherman had devastated the railroad shops and a gun factory in the area. During the war, a resident named Charles Malloy had his slaves make a railroad cut. His payment was a shipment of textile machinery that had been taken from an English blockade runner.

Malloy, however, couldn't make the machinery run, so he called in Mr. Morgan's grandfather, Mark Morgan, and he established the first mill in 1872. A second unit was added in 1887 and a third in 1890. These small beginnings of Laurinburg's now prosperous textile industry manufactured yarn primarily for distribution in five-pound skeins which were peddled in the countryside to the home weavers.

Mark Morgan's grandson was chairman of the site selection committee that got 800 acres for the new college. He also was chairman of the building committee of the hospital and was a member of other committees that aided in the establishment of Laurinburg's remarkable record and its selection as an All-America city.

Laurinburg and Scotland County boast of nine modern mills weaving cotton, Dacron, rayon, nylon and acetate. The payroll is well over seven million dollars annually.

The growth of Laurinburg has pretty much followed the rise of the textile industry. In 1940, employment in the mills was about 1,800. Today it is 2,900. Laurinburg's population in 1940 was 5,685. It is estimated today at 9,000.

Laurinburg and Scotland County took a day's break in their forward surge Jan. 18 to honor past accomplishments. But they have plenty to look forward to. A ten million dollar college will open on Laurinburg's doorstep in 1960, and there's the problem of a new City Hall. But most of all these 9,000 residents have a reputation to uphold—the reputation of an All-America city.

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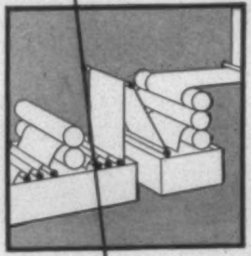

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Continuing Modernization at Inman Mills

Two policies, "produce only high-quality fabrics, and have the machinery, plant and personnel to do it," guide management of Inman Mills in directing operations at Inman and Enoree, S. C. This account of a continuing modernization program is published concurrently with a similar article in the WHITIN REVIEW of Whitin Machine Works.

INMAN Mills, Inman, S. C., and its Riverdale Division at Enoree, S. C., are notable examples of how the American textile industry grows. This growth is hardly visible to the passerby since it does not make itself known by large buildings new-sprung in former fields, but is an internal growth created by new high production equipment and the utilization of modern manufacturing techniques and accessories. Together, these factors place mills like this at the pinnacle of the textile mills of the world, by producing more and more textile fabrics at high efficiency, increasing the material wealth of the economy and reinforcing and strengthening the textile industry itself.

Only recently, the company completed an extensive and long-range modernization and new machinery program in both mills. Included in this was a large amount of new Whitin machinery and modernization changeover parts for the spinning and card rooms of both of these mills. At Inman Mills, six new Whitin 12x6½-inch long-draft roving frames were installed and six existing roving frames converted to long-draft. Two hundred and twenty-eight spinning frames totaling 56,032 spindles were modernized by conversion to the Whitin Super-Draft system, higher draft constants, and application of top arm weighting with anti-friction front and non-lubricated middle and back top rolls; 19,856 of these 56,032 spindles were replaced with Whitin Pioneer anti-friction top drive-type filling spindles. Pneumafil and Pneumastop were applied to all spinning and roving frames.

The Chapmans—J. A. Jr., J. A., Robert H. and Marshall

Members of the Chapman family have guided Inman Mills for three generations. Jim Chapman Jr. is vice-president of Inman; his father, James A. Chapman, a son of the company founder, is president and treasurer; Robert Chapman, brother of the president, is vice-president and assistant treasurer; and Marshall Chapman, another son of the president, is assistant treasurer and assistant secretary.

At the Riverdale Division, 38 new Whitin Superflex spinning frames with a total of 9,120 spindles were installed, and 29,352 spindles were modernized by the application of Whitin Super-Draft, new anti-friction front and non-lubricated middle and back top rolls and top arm weighting arrangements. On 50 frames having a total of 13,032 spindles, the traverse was lengthened and 34 were supplied with new head ends. New Whitin Pioneer anti-friction spindles were also applied to all of the frames; 1,216 new Whitin flyers were also purchased for the roving frames.

Other new equipment installed recently includes overhead cleaners, new spooling and warping equipment, Pneumafil and Pneumastop and more than 800 looms.

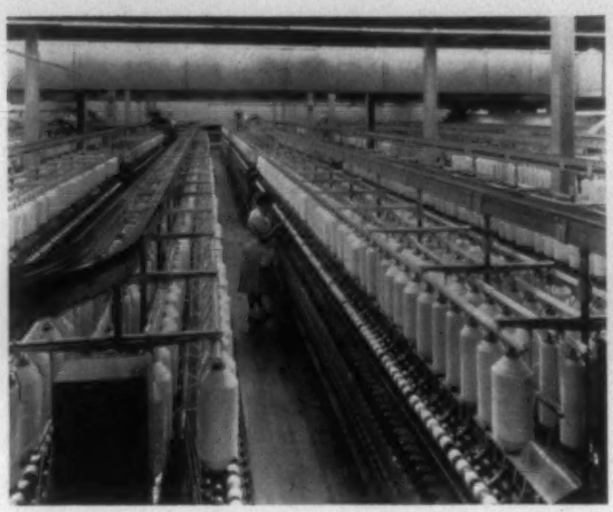
At Inman Mills, two Whitin Axi-Flo cleaners are currently being installed and at the Riverdale Division, two Axi-Flo cleaners and 14 Whitin Axi-Feed blending feeder attachments are going in.

Founded by the late James A. Chapman in 1901, Inman Mills today has approximately 56,000 spindles and produces approximately 185,000 pounds per week of piques, waffles (a honeycomb weave fabric) broadcloths and print cloth specialties, using 1 1/16 and 1 3/32-inch cotton. Counts range from 20s to 42s, averaging 32s to 34s. The Riverdale Mills were purchased in 1934 and merged with Inman Mills in 1954. This division has 38,472 spindles and produces approximately 295,000 pounds per week of industrial fabrics such as drills, jeans and sateens, poplins, B sheetings, wide fabrics for coating, and buffer cloth. Counts range from 8s to 25s, averaging 17s.

The company management has remained in the Chapman family. James A. Chapman, son of the founder, is president and treasurer, his brother, Robert H. Chapman, vice-president and assistant treasurer. E. L. Ramey is vice-president in charge of production, B. F. McCormick is secretary. James A. Chapman Jr. is vice-president and Marshall Chap-

Daley, Ramey, Thompson

E. L. Ramey, vice-president in charge of production, confers with R. L. Daley, superintendent of Inman Mills, and Lewis W. Thompson, superintendent of the Riverdale Division.



At Riverdale the new spinning frames are equipped with overhead cleaners and open-type creels.

More than 800 new looms have been installed in the Riverdale weave room.

man is assistant treasurer and assistant secretary. The technical staff includes John C. Bell, cotton buyer; Robert L. Daley, superintendent of Inman Mills Division; and Lewis W. Thompson, superintendent of Riverdale Division.

The objective of continuing successful operations is implemented by two clear policies according to President Chapman—namely, to produce only high-quality fabrics and to have the machinery, plant and personnel to do it. Such a policy has meant continuous plant improvement, the adoption of new equipment and techniques as soon as proven meritorious. For example, Inman Mills was probably one of the first mills to be 100 per cent equipped with anti-friction spindles. It was the first mill to have its carding and spinning rooms completely air conditioned with refrigeration, Riverdale being comparably equipped only a short time later.

Inman Mills Yarn Organization

For producing the 20s to 42s used in fabrics made at Inman Mills, the mill yarn organization is as follows:

Picker Lap Wt.	14 oz.
Lap Length	54 yds.
Card Production	8 lb./hr.
Card Sliver	52 grs.
Breaker draw sliver 6 ends up, 12" x 36" cans	52 grs.
Finisher draw sliver 6 ends up, 14" x 36" cans	54 grs.
Roving 12" x 6½" For warp yarns 25s—40s	1.00 H.R.
Roving 9" x 4½" For filling yarns 20s—42s	1.20 H.R.

The mill maintains close quality control over its operations, with Micronaire analysis of the purchased cotton and again at the finisher drawing, and evenness testing of the sliver and yarn. With the new Whitin long-draft 80-spindle 12x6½-inch roving frames, mill tests show that the variation on the 1.00 hank roving is substantially better than roving ever produced before. The new roving frames are running 170 r.p.m. front rolls, 709 r.p.m. spindle speed, and the full bobbin holds approximately 52 ounces. The twist multiplier is 1.18.

Modernization of the spinning frames at Inman Mills has also produced substantial quality improvement and major economic advantages. The management at Inman Mills has found that ends down have decreased 25 per cent. The break factor increase averaged ten per cent on the range of yarns produced. In this mill, the management stated that with Whitin long-draft roving and Super-Draft spinning it was producing better quality yarns from 1.00 hank roving than it could formerly make with 1.65.

Coupled with the improvement in yarn and fabric quality, this company secured a material reduction in production costs both in the card and spinning rooms. When mills modernize, production savings in both of these areas arise from utilization of larger packages, more efficient use of operative labor, lessened material handling and piecings, decrease in repair, maintenance and lubrication costs, production and power costs, etc. Quite frequently, greater savings than those secured in either the carding or spinning rooms will be secured in the increased efficiency of the winding operations, and additional substantial savings are secured in the weaving operations through the improved quality and evenness of the yarn.

At Inman Mills, operator efficiency in the spinning room was substantially increased and roll picking was put on weekly rather than daily basis. Lubrication of top rolls was virtually eliminated. Here is a typical spinning set-up:

Count	31s
Ring	2"
Traverse	8"
Front Roll Speed	140
Twist Multiplier	4.23
Traveler Speed	5,438
Spindle Speed	10,400
Oz./Bobbin	3.68

Riverdale Division

When the Riverdale Division was acquired by Inman Mills in 1934, the management was faced with a far-reaching and difficult decision. Set up to produce approximately 300,000 pounds per week of osnaburgs, the mill was organized for a market which had virtually disappeared after World War II. Facing the prospect of being forced to close the mill, the management had two choices. The Riverdale Division could be reorganized to produce light sheetings, but this would have reduced the working staff by nearly one-half. To maintain full employment for the 650 people who

Partial view of 38 Whitin Superflex spinning frames recently installed at the Riverdale Division of Inman. These have 240 spindles, four-inch gauge, 2¾-inch ring and 11-inch traverse.

At Inman, 56,032 spindles were modernized by application of Whitin Super-Draft, with 228 frames involved. Lee Loftis is overseer of spinning.

looked to this mill for their livelihood, management decided to enlarge it and extend its fabric production to high-quality numbers for which there was a foreseeable market and which would use a range of counts up to print cloth yarns.

Since that time, the management has increased the mill's floor space and added a large amount of new machinery from the opening room through the weave room and cloth rooms in order to secure a strong competitive position.

The Riverdale Mills Division produces approximately 295,000 pounds per week, primarily industrial fabrics, on three shifts, using from one to 1 1/32-inch cotton in counts from 8s to 25s. The yarn organization is:

Picker Lap	14.5 oz. (50 yds.)	
Card Sliver	54 grs./yd.	
Breaker Drawing	54 grs. (8 ends up)	
14″ x 36″ cans holding 20 lbs.		
Finisher Drawing	54 grs. (8 ends up)	
15″ x 42″ cans holding 28 lbs.		
Roving 12″ x 6½″	.57 H.R.	.80 H.R.
Yarn Counts	8s—14s	15s—25s

Included in the most recent phase of the continuing modernization program at Riverdale Division of Inman Mills are 38 Whitin Superflex spinning frames of 240 spindles each, four-inch gauge, 2¾-inch ring, and 11-inch traverse, totaling 9,120 spindles. This modern type frame is equipped with Whitin T3 Super-Draft system, a 36 millimeter cradle with five-millimeter opening. Double revolving top clearers are used. It is driven by a 15-horsepower motor with vari-pitch drive. All roving is run single. The 12 x 6½-inch bobbins are held by Eclipse holders in a Whitin E-3 creel which has an open bottom center and channels on top. The frames are equipped with overhead cleaners and with Pneumafil.

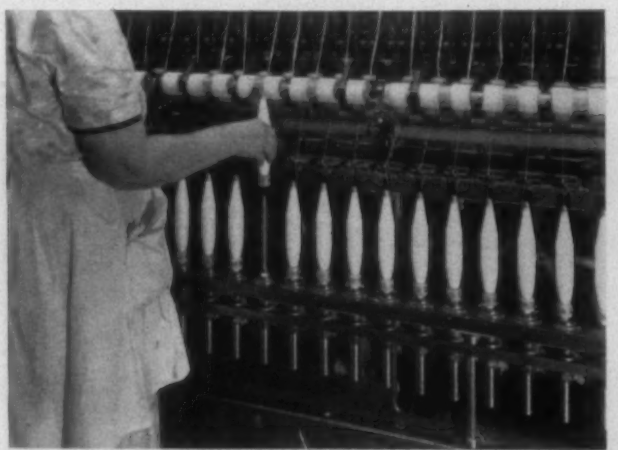
A typical spinning operation on the new Whitin spinning is as follows:

Count	14s
Ring	2¾″
Traverse	11.0
Front Roll Speed	156 r.p.m.
Twist Multiplier	4.30
Traveler Speed	5744 f.p.m.
Spindle Speed	7985 r.p.m.
Oz./Bobbin	11.0

Modernization Benefits

The installation of new spinning equipment provides, in virtually every instance, a wide range of benefits. Among these is improvement in yarn quality, and reduction in oper-

The cloth room at Inman Mills.



Over 19,000 new Whitin Pioneer top drive filling spindles have been installed at the Inman plant. With this type of spindle more yarn is put on the bobbin and higher speeds can be used.

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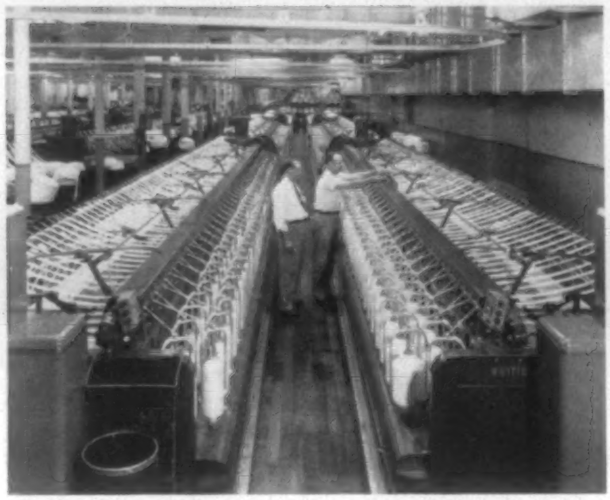

Roving at Inman is made on 12 x 6½-inch Whitin long draft frames.

ating cost as a result of a large number of factors involved. In well-run mills with alert and progressive management, all of these advantages can be utilized completely. As at Inman Mills, it was found that there was a substantial improvement in ends down. The break factor in yarns spun increased from eight to ten per cent. Because of more favorable layout, spacing, machine efficiency, reduction in operator's duties, lessened creeling and the other factors attendant upon new or modernized machinery, operator efficiency increased materially.

The management of Inman Mills was highly pleased to find that the finished fabric was not only stronger, but had a better appearance and improved customer acceptance.

The increase in roving size to .57 and .80 as against .80 and 1.00 hank roving formerly made, effected substantial savings in the card room. Six roving frames no longer required were transferred to Inman Mills.

The same savings in roll picking and lubrication were secured at Riverdale Division also. It was found that roll picking could be established once a week instead of once every 24 hours.

After the yarns are spooled on a Barber-Colman Model D spooler, warped and slashed, they pass through the weave room which has also been completely modernized with 801 new Draper looms. With such an extensive amount of new and modernized machinery, the mill is highly competitive in its production of quality fabrics, flexible in its operations, and organized efficiently to meet tomorrow's market conditions as well as today's.

Company and Personnel

In addition to its continuous modernization of its plants and equipment, the management is very keenly interested in the working conditions and well-being of the fine group of people with whom they work. A large number of individuals have worked for the company for many years; some families, for several generations. Top executives are closely acquainted with large numbers of the employees, share their personal joys and sorrows and feel that all are members of a team dedicated to producing quality textiles and making this world a better place in which to live.

In Inman and at Enoree, the company owns nearly 500 houses. More than $1,000,000 has been spent in providing each of these houses with the best in modern conveniences. The company also sponsors many employee activities and is particularly interested in their college scholarship program which keeps at least 16 sons and daughters of employees in school all the time. Realizing that modern machinery is useless without properly trained personnel, the Inman-Riverdale Foundation was established several years ago to award annual scholarships to the Clemson School of Textiles and Winthrop College for Women.

The modernization program described above is only a small fraction of the internal growth which has taken place at Inman Mills and the Riverdale Division. This summary highlights the manner in which continuous growth takes place in a successful textile mill by describing one recent segment of a modernization program.

Diversify Without Forfeiting Position

Many firms in the textile industry have resources—financial, technical and managerial—which can be successfully applied to non-textile lines without necessarily requiring a forfeiture of the firm's present position in the textile industry, according to the Diversification Institute, whose current studies indicate "the definite possibility that U. S. textile firms will be unable to share fully in the secular growth of our economy."

The institute, which does research and counseling in the diversification field, reports that inadequate profit margins and substantial excess capacity typically characteristic of the textile industry may well continue interspersed with occasional periods of profitable operation. It warns, however, that if diversification is sought, "it is a course of action which must be carefully considered in the light of the specific situation in which individual companies find themselves."

The study revealed that "returns on net worth in the textile industry since 1925 have averaged 7.1 per cent after taxes, compared with 10.3 per cent, or 45 per cent higher, for all manufacturing, while in the last complete year, figures were 7.1 per cent for textile earnings as opposed to 15 per cent for all manufacturing."

The institute study also noted that in addition to relatively low profit margins, "the textile industry has been characterized by sharp and frequent fluctuations in earnings not coincident with those of general business activity." It said that textile industry's plight is partly due to "serious" Japanese inroads into the American market, but that this "is only the latest in a series of problems which have plagued the industry in past years."

Sweden Develops Its First Synthetic Fiber

A new synthetic fiber—this one called Tacryl—has been introduced by a firm in Sweden, Stockholms Superfosfatfabriks AB. The first synthetic to be developed in Sweden, Tacryl can be used with wool or rayon wool and the final product is said to have a pleasant feel and good thermal insulation. It is sunproof, weatherproof and windproof, and retains pleating and other shaping, making it especially suitable for wash-and-wear fabrics. While no large-scale marketing of the new fiber is foreseen at this time, the manufacturer does plan to turn out increasingly larger quantities. The price of the new yarn is said to be in line with other acrylic fibers on the world market.

Opening, Picking, Carding & Spinning

Alabama Mill Superintendents and Managers Piece Up a Few Loose Ends

By HARWELL HOWARD

PROBLEMS of carding, spinning and maintenance received a thorough overhauling at the Fall (Oct. 27) meeting of the Alabama Textile Operating Executives in Thach Hall on the campus of the Alabama Polytechnic Institute, Auburn. More than 300 representatives from mills up and down the state were on hand for lively discussions of carding, led by Dwight Epperson, superintendent of West Boylston Mfg. Co., Montgomery, and of spinning, led by Woodrow Dunn, superintendent, Huntsville Mfg. Co., Huntsville. Questions about maintenance were discussed during both the carding and spinning sessions.

The first carding question dealt generally with mill experiences in using new cotton oils or softeners to reduce cotton fly. Specifically, this question asked mill executives who had had experience with the U.N.O. C-7 cotton fiber treatment what effects they had noticed on eight different points.

Of the 19 Alabama mills which sent in answers to questions for this meeting, 15 replied either no comment or no experience in regard to this question. Another said that since it had tested new oils on only one lot, it did not feel that its results were conclusive.

The most comprehensive answer to the question was furnished by Mill H. This mill reported the results, on each of the eight points, of tests it had run of approximately 10,000 pounds of stock with this C-7 fiber treatment. Point by point, Mill H reported the following results:

(1) On yarn strength—"Break factor on 21s warp was 1,930 as compared with 2,055 on regular stock checked at same time."

(2) On static on cards—"Seemed to be less static."

(3) On dust in card room—"Less dust on all machinery involved."

(4) On amount of waste—"No difference noticed."

(5) On ends down in spinning—"39.5 ends down per 1,000 spindle hours as compared with 43.0 on regular stock checked at same time."

(6) Did machinery rust?—"No."

(7) Effect on production?—"No change made."

(8) What per cent of the formula was added?—"Two per cent."

In reply to this same question, Mill H also furnished the results, on each of the above counts, of tests it had made using U.N.O. XI concentrate. Point by point, these results agreed with the results noted for tests with the C-7 cotton fiber treatment except in regard to the effect on yarn strength ("on 21s warp, break factor was 2,023 on treated stock compared with 2,092 regular tested at same time") and in regard to the effect on ends down in spinning ("ends down 45.7 on treated stock compared with 39.0 on regular.")

The second carding question asked the mill operating executives about certain results that had been noticed following the conversion of 12x36-inch to 18x36-inch or 18x42-inch card cans. Sixteen mills did not answer this question. Mill N replied to the four parts under this question as follows:

(1) Discuss the results expected and actually obtained from converting to the larger cans—"We converted from 12x36-inch to 18x42-inch card cans, and expected to be able to get 36 to 40 per can—however, we have only been able to get 26 so far. Our doffing cycle was increased from 40 minutes to two hours."

(2) How has installation of large cans on cards affected labor force on cards and drawing?—"We expect to cut our labor force by one-third. However, we charged out all our drawing at the time we converted our cards, and we haven't reached our expected goal as yet."

(3) What per cent reduction in cost per pound was obtained?—"None."

(4) Did you experience any mechanical difficulties?—"No."

In reply to this same general question on converting to larger cans, Mill F, with experience in changing from 12x36-inch to 14x36-inch, but no experience in converting to 18x36-inch or 18x42-inch—reported an increased running time of 15 per cent between doffs. But this mill, which has not completely finished the change-over, said that the installation of larger cans on cards had not affected the labor force on cards and drawing, reduction in cost per pound, nor had it caused any mechanical difficulties.

Only five mills answered the third carding question, which was: "Please discuss your experience with slubber stop motions, with regard to (1) job loads, (2) waste, (3) maintenance, (4) quality, (5) production."

Replies by Mills C and D to this question were in close agreement, with neither reporting changes in job loads, and with both reporting slightly less waste, improved quality and no difference in production. However, while Mill C said that the use of slubber stop motions had no effect on maintenance, Mill D reported that additional maintenance by the mechanical department was required.

Mill M answered the five parts under this question by reporting: (1) increased job load from four to five frames on 1.50 hank, 10x5 slubbers; (2) waste reduction so slight as to be nil; (3) no problems of maintenance in three years of operation; (4) quality is definitely improved due to

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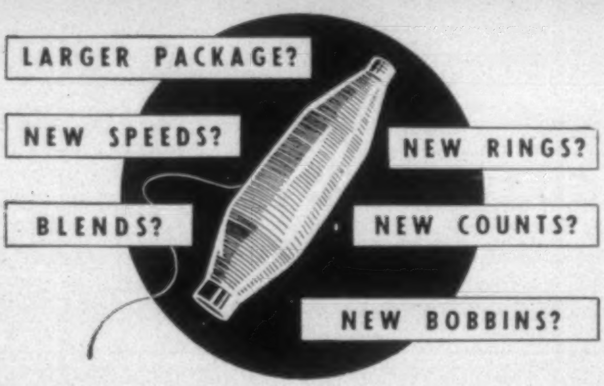
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frame stopping when end comes down; (5) no increase in production.

The first of four questions about spinning room operations was: "What is the best method for keeping a continuous check to insure correct builds and uniform package weights on both warp and filling? (a) What is the best method for a continuous check to keep worn or bad bobbins from getting into your spinning?"

Mill C's answer to the first part of the question was: "The entire doff on each filling frame is weighed once each month. Warp frames are all doffed on a time schedule. Weights on warp packages are controlled by having predetermined running time. Builds on filling packages are checked periodically to keep them as uniform as possible." This mill's answer to the next part of the question, the best way of checking to insure that worn or bad bobbins do not get into the spinning, was "to have doffers watch for these, throwing them out when they are found, and to have someone go through and hand pick at intervals."

Mill S reported that the density of yarn on warp and filling could be controlled by maintaining uniform spindle speeds and correct traveler sizes. "Use doff tickets initiated by the doffer," this mill continued. "This ticket should have date, frame number, yarn count and stock. Have the doffer place this ticket in every doff of warp or filling. By use of such doff tickets any non-standard doff of warp or filling can be traced back to the frame or the doffer causing the trouble." At this mill, bad bobbins are culled out by a person who is responsible for servicing the spooler pans.

The second question about spinning problems, in two parts, elicited fewer and shorter answers than did the first question. Dealing generally with mill experiences with umbrella-type creels, suction-type cleaning and large package roving, this question asked specifically: "What has been the per cent cost reduction attributable to each of these?" and with all of these installed, "what is the total effect on spinning costs on percentage basis or cost per pound basis?"

Apparently Mill I was the only mill that had installed all of these; it was unable to report the cost reductions attributable to each since they had all been installed at the same time. However, this mill reported that its roving tender's cost per pound had been reduced 43 per cent "by going from 10x5 package, 1.75 hank roving, to a 12x6½, 80 spindle, FS-2 frame, .90 hank roving, and installing Adams stop motions simultaneously." This mill added that, "In the spinning room where we have recently installed a central fan and central collection-type Pneumafil system with Pneumafil creels and, of course, large package roving, we increased the spinners work assignment from 2,652 spindles per spinner to 3,432, thereby decreasing warp spinner cost by 23 per cent."

Only two mills were able to discuss the third spinning question which was: "Give your experience in going from wide cradles to narrow cradles. (a) Did you grind down bosses of present rolls? If so, how was this done? Did rolls maintain their hardness and runout tolerance after being ground? (b) Did you grind down all lines of rolls?"

Mill C's answer: "Only two frames have been changed from the wide cradle to narrow cradle. This was done by replacing bottom knurled rolls. We did not grind the bosses on the front and back bottom rolls." Mill M reported: "We have had limited experience with double apron drafting systems on spinning in that we have only one frame on filling, and four frames on warp spinning. It was necessary to grind the bosses shorter (on middle roll) on the Roberts change-over to install the narrow cradles. This was done by Medley Mfg. Co. of Columbus, Ga. Whitin furnished new middle roll for the Casablanca change-over. The Saco-Lowell Duo-Roth change-over did not require changes in the middle roll."

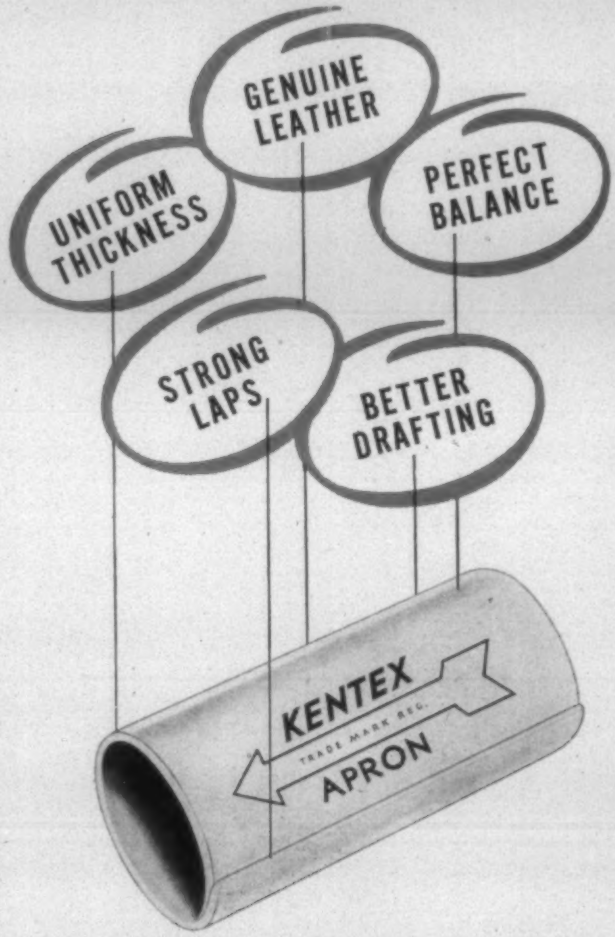
The fourth and last spinning question asked what mill experiences had been with top-drive filling spindles, and wanted to know specifically: "(a) In going to top-drive anti-friction spindles, to what extent are you able to increase spindle and front roll speeds? (b) Are you running longer quills and larger packages? (c) Can your regular spindles be converted to top drive?"

Mill R's answer was one of only two replies submitted to all parts of this question: "We have Marquette and Whitin anti-friction top-drive spindles running on 2¾-inch gauge frames spinning combed 34½ yarn. The Whitin spindles have a one-inch whorl and the Marquette spindles a 25/32-inch whorl. Both types of spindles are driven by an eight-inch cylinder. (a) For experimentation we have increased speeds seven per cent and 17 per cent on the Whitin top-drive spindles. Ends down; these are not complete. (b) We are not running longer quills on top-drive spindles. (c) Converting of regular spindles to top drive is not impossible. However, we recommend purchasing new top-drive spindles."

The first of two questions on maintenance problems called for a discussion of methods employed in assigning repair orders to shop personnel and of methods used in maintaining repair cost records. Mill B reported that when work orders from departments in the mill are received in the office of the mechanical department, the date and the time the order was received are stamped on the back and the order is then given to the shop foreman who issues the orders to personnel under his supervision. "The foreman then records the job on a work order sheet," this mill continued, "with the time started. When order is completed he records time finished and any materials used on job. The completed orders and work sheets are returned to department office where the cost for each job is figured and recorded. The completed orders and work sheets are filed for future reference. If the first shift man does not finish order, the time he stops is recorded on work sheet and the second shift foreman will make a new work sheet on second shift man for time started and time stopped, thus keeping up with time each man spent on job. Each man in department has his own work order sheet so if two or more men are assigned to same job the actual man-hours are kept on each job."

"What is the best type of material and method of use in repairing and maintaining concrete floors and platforms?" was the second and last maintenance question. Mill B uses a preparation called Stontop which, by penetrating and hardening the concrete, helps prevent ruts and holes from forming.

More than one mill recommended a "Stonhard" resurfacer. Another mill called a material known as Adamite, made by the Hallemite Mfg. Co. of Cleveland, Ohio, "satisfactory." This material is mixed with water and applied to the area which is to be patched, after the area has been cleaned and coated "with a special bonding material furnished by the Hallemite Co."



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A Study in Loom Fixing

By FRANK D. HERRING, Part Eleven

ONE of the loom fixer's most difficult problems is controlling filling breakage on his section, because there are so many different types of filling breakage and so many different causes. Several things will cause the filling to break while the loom is running. There is filling breakage on the transfer, and also there is filling breakage before the transfer, caused by the filling bobbin turning in the battery while it is being held in position for transfer. This article deals with the latter, breaking before the transfer, the causes for it, and the procedures required to overcome it.

The yarn filled filling bobbins are placed in the bobbin disc, which is the rotating part of the battery assembly, and when the yarn is depleted from the bobbin in the shuttle a full bobbin is transferred from the battery into the shuttle. This transfer is made automatically, without stopping the loom off, and when transfer of the bobbin is made the bobbin disc rotates and places another bobbin in position to be transferred into the shuttle. It is this bobbin in transfer position that turns while the loom is in operation and breaks the filling yarn before the transfer is made.

When the full bobbins are placed in the battery disc, a strand of yarn attached to the bobbin is placed in position over the thread guide and extends down and around the thread holder. This secures the strand of yarn in place for the transfer. It is this strand of filling yarn that is broken. Unless the fixer makes a check for this condition, he is likely to work on the transfer mechanism for filling breakage on the transfer, because after the loom stops off it has the appearance of being just that.

Of course, the fixer can readily detect if the filling yarn is being broken while the loom is running, because if this is true a portion of the yarn will be depleted from the bobbin in the shuttle. But if the shuttle contains a full supply of yarn when he goes to work on the loom for filling breakage, it is a sure indication that the filling is being broken on the transfer or before the transfer is made.

In this event he should put the shuttle in position and start the loom and check to determine if the bobbin in transfer position in the bobbin disc is slowly turning before he starts working on the transfer mechanism. By doing this he will get the loom fixed without unnecessary work and delay.

When the filling yarn is spun and wound onto the bobbin, it is wound on counter-clockwise on what is termed regular wind filling. Reverse wind filling is wound onto the bobbin clockwise. When the bobbin turns in the bobbin disc while the loom is in operation, it always turns in the same direction, clockwise. This causes the regular wind filling to be broken by excessive tension being exerted on it. On the reverse wind filling, it unwinds the yarn from the bobbin and allows the strand of filling extending from the bobbin over the thread guide down to the thread holder to become slackened enough so that it will sag down far enough to be contacted by the picker stick, or some other part of the rotating lay, and become broken. When the bobbin is turning in the battery disc, it is very difficult to detect since it turns only a very small fraction of an inch on each pick of the loom. This being the case, the fixer can save time by making a pencil mark on the yarn on the filling bobbin being watched. By doing this he can detect after a few picks if the mark has moved. Vibration of the battery disc on the pick is a contributing cause for the bobbin turning, but it is not the basic cause because if all the parts of the transfer mechanism are in good condition vibration alone will not cause the bobbin to turn.

Several things can, and do contribute to this trouble, so, when the fixer is confronted with it he should check the following things in the order named:

Battery disc and battery disc stud.
Small end disc bobbin holder.
Bobbin guide.
Bobbin support.
Hold back pawl.
Feed pawl.

The battery, or bobbin disc is mounted on the battery disc stud, and the tolerance for lost motion between the disc and the stud is very small, not more than 1/64th of an inch. If there is excessive lost motion at this point it will allow the butt end of the filling bobbin, which is contained in the bobbin disc, to be thrown out of line and proper contact with the bobbin guide and also the bobbin support. This will sometimes cause the bobbin to turn before the transfer is made.

The best way for the fixer to check the battery disc for lost motion is to take hold of the bottom part of the thread guide, which is mounted on the battery disc, and pull up on it. By doing this he can readily determine if there is excessive lost motion in the disc. Sometimes this lost motion will be confined to the battery disc stud, and sometimes the hole in the battery disc will be worn. Of course, it can be both. In this event it will be necessary to replace both with new parts. By removing the battery disc from the stud, the fixer can see if the stud is excessively worn, and if so it should be replaced. Then the battery disc should be tried on the new stud to determine if the disc should be replaced.

There is an extension lug on the battery stand directly underneath the filling bobbin in transfer position in the battery disc. The purpose of this extension is to help prevent the transfer mechanism from losing control of the bobbin while transfer is being made. Under normal running conditions, the butt end of the bobbin does not come in contact with this extended part of the battery stand. But if there

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is excessive wear and lost motion on the battery disc, the butt end of the bobbin will be allowed to incline down and back far enough to contact this extension while the loom is running, and before the transfer is made. This will cause the bobbin to turn, because on every pick of the loom there is vibration throughout the entire loom, and this vibration shock is transmitted through the bobbin guide onto the butt end of the bobbin and forces it back against the extended lug on the battery stand and this will turn the bobbin slightly on every pick. The natural vibration of the loom will not cause the bobbin to turn if everything else connected with the transfer mechanism is in good condition.

The small end disc is a part of the battery disc assembly, and the small end disc bobbin holders are mounted on the small end disc. These bobbin holders are the means of securing and holding the filling bobbins in place in the bobbin, or battery disc. The bobbins are held in place by spring pressure exerted onto the small end of the bobbin through the bobbin holder, and it is vitally important that the spring pressure be adjusted to the proper tension. If the pressure is too great it will cause the small end of the bobbin to be damaged when it is driven from the holder on the transfer, and if the spring pressure is not sufficiently strong it will not hold the bobbin securely and this will allow the bobbin to turn more readily. With everything else in good condition, this alone will sometimes cause the bobbin to turn in the disc before transfer is made. This adjustment is made by moving the small end disc in or out, laterally, until the proper adjustment is found.

FORTISAN-36 GOES TO SEA—By keeping out rain but admitting light, a new hatch tent permits normal loading and discharging of cargo in inclement weather. The tent, shown here on Moore-McCormack Steamship Lines' Mormacswan, is made of translucent viny reinforced with Fortisan-36, a high-strength yarn of Celanese Corp. of America. The tent was supplied by Herculite Protective Fabrics, Belleville, N. J.

The amount of light transmitted to the normally darkened ship's hold is sufficient to permit normal operations under safe conditions. Tests with a light meter showed no appreciable loss on the under side of the tent, the manufacturer claims. The tent weighs only half as much as those manufactured from most conventional materials. Significant loading-gang time is saved through the ease and speed of erecting and dismantling. Additional advantages are that the tent need not be hung to dry after use in rain or snow. It can be stored compactly and is resistant to mildew or rotting even when wet.

When the filling bobbin is in transfer position in the battery disc it contacts and rests against the bobbin guide. The bobbin guide is a vitally important part. It is precision made by the loom builders. The fixer should check this part to determine if it is tight in place or excessively worn. If it is loose or worn it will create excessive lost motion between itself and the butt end of the bobbin, enhancing the possibilities of the bobbin turning in the disc.

Most bobbin guides are made with three small grooves cut into them on the back side. These grooves are for the purpose of helping to guide the bobbin into the proper place in the shuttle when the transfer is made. The three steel rings on the butt end of the bobbin are supposed to rest in these grooves when the bobbin is in transfer position in the disc. If the disc or disc stud is worn enough to throw the rings out of these grooves, it will cause the bobbin to turn before transfer is made.

When the bobbin guide is in position on the battery stand, it is at a slight angle in relation to the bobbin in position in the battery disc. The bottom part of the bobbin guide inclines forward, towards the front of the loom. This is necessary in order to give the transfer hammer clearance when it drives the bobbin from the disc into the shuttle on the transfer. The transfer hammer travels in an arc on its downward stroke, and this angled position of the bobbin guide has a tendency to force the bobbin downward when it is in position for transfer in the battery disc. The vibration of the loom forces the bobbin downward. The rings on the bobbin butt contact the bobbin support, and if there is excessive wear on the disc, disc stud or the bobbin guide, the butt end of the bobbin will contact the extension on the battery stand. This will cause the bobbin to turn in the disc before transfer is made.

The bobbin support should be checked to determine if it is properly adjusted in relation to the butt of the bobbin in the disc, and also if it is excessively worn. The functional requirements of the bobbin support is to help hold the bobbin in the correct position in the disc while the loom is running, and also to act as a guiding agent for the bobbin when it is transferred from the disc into the shuttle. The bobbin support is adjustable, and it should be adjusted to a point where it will hold the butt end of the bobbin in place where the rings on the bobbin butt will contact, and rest against the bobbin guide at about the halfway point of the face of the bobbin guide.

The steel rings on the butt of the bobbin are the only parts of the bobbin that come in contact with the bobbin support, and after continued use these rings will wear grooves in the lip of the support. These grooves will have a tendency to cause the bobbin to turn in the disc, because the vibration on every pick will cause these rings on the bobbin to be driven back into the grooves. As the lip of the support contacts the bobbin rings near the bottom part of the bobbin, it will cause the bobbin to be slightly raised out of position and turn slightly at the same time.

There are several different types of bobbin supports being used on automatic looms, but the functional requirements of all of them are the same. Provision is made on all of them for the above-mentioned adjustments.

The hold back pawl should be checked to determine if it is properly adjusted or excessively worn. The hold back pawl is supposed to hold the battery disc in place while the loom is running, and also while the transfer is being made. It contacts and rests in position on the ratchet gear part of the battery disc. It should be adjusted to a point where it will drop into place and prevent the disc from turning the wrong way. In other words, it should lock the disc in place after each transfer of the bobbin, and it should be adjusted to where there is a minimum of lost motion between the pawl and the ratchet when the pawl is in rest position. Excessive lost motion at this point will have a tendency to encourage the turning of the bobbin in the disc before the transfer is made.

Most hold back pawls are mounted in place on the battery stand with eccentric pins, and this makes it easy for the fixer to make and keep very accurate adjustment on the pawl. It also prevents having to change them when they, or the pawl, become slightly worn. However if the pawl or the pin is excessively worn, they should be replaced with new parts. If they are worn too badly it will sometimes allow the battery disc to turn backward slightly while the transfer of the bobbin is being made. This is likely to cause the transfer mechanism to lose control of the ingoing bobbin and cause a smash up.

The feed pawl is mounted on the transfer hammer, a very important and little understood part of the vitally important transfer mechanism. The fixer should check to determine if it is in good condition and properly adjusted. The main purpose of the feed pawl is to rotate the battery disc into place after each transfer of the bobbin from the disc into the shuttle. It does this by automatically contacting the ratchet gear on the battery disc immediately after each transfer of the bobbin, and it should turn the disc around to a point where the feed pawl will be free to drop into place. At this point the pressure between the feed pawl and the ratchet gear should be released, because if pressure is held here while the loom is running it will create excessive wear on the feed pawl and also on the ratchet gear on the disc.

If the feed pawl does not raise high enough after transfer is made to draw the bobbin in place against the bobbin guide and to allow the hold back pawl to drop in place, the fixer should remove the transfer hammer and file the lug on it where it makes contact with the battery stand when it is in raised or rest position. If the feed pawl is raised too high when it is in rest position, it will exert excessive pressure on the teeth of the ratchet and also on the bobbin rings in contact with the bobbin guide. This will create excessive wear at both these places.

In this event, the trouble can be corrected by removing the feed pawl and filing it a little at the point where it makes contact with the transfer hammer when it is in rest position. Filing lugs are provided by the loom builders for making both of these adjustments, and yet a lot of loom fixers go through life and never learn what they were put there for. This is not in the least intended as criticism for the loom fixers, because too many of them are never taught the many fine points of loom fixing during their training periods. That is the reason supervisory work is mentioned so often in these articles, because the loom fixer will be just as good as the training he receives. The tolerance for lost motion on the feed pawl assembly is so small that very little wear and lost motion can be allowed. If any of the contacting parts of the feed pawl or transfer hammer are excessively worn they should be replaced with new parts.

Bleaching, Dyeing & Finishing

Dyeing Filament Nylon by Chem-nyle Process

By WALTER H. HINDLE, Associate Director of Textile Research, The Chemstrand Corp.

This development, first announced in early September, uses dye assistants to modify the application of existing acid and direct dyestuffs. Mr. Hindle's paper was delivered last year to various groups of textile technicians.

NYLON, discovered by Dr. Carothers and developed by the Du Pont Co., was the first truly man-made fiber to reach the textile market in major volume. The consuming public had only a brief time to appreciate the potential value of filament nylon before World War II took it almost completely out of the civilian market. The performance of filament nylon in the war effort, in conjunction with its scarcity in the normal textile market, served to cover nylon with an aura that had not previously been accorded to any textile fiber. Many of us will recall that the first filament nylon fabrics to reach the market were erstwhile parachutes that sold exclusively on the basis of inherited glamor. As for dyeing, almost anything went and it spoke well of the intrinsic value of nylon that it outlived and overcame these early debacles.

However, when fabrics of real commercial value were finally developed, it rapidly became obvious that, because of inherent qualities of filament nylon and its susceptibilities from a processing standpoint, level dyeing and colorfastness were going to present a very serious problem. Unlike other man-made fibers that issued after the entry of nylon into the textile market, there were no insuperable difficulties in applying color *per se,* but it soon developed that the choice as to method of dyeing lay between the use of dispersed acetate dyestuffs which gave good dyeing uniformity and poor over-all colorfastness and wool dyestuffs which gave good colorfastness but poor coverage of the nonuniformities existing in filament nylon yarns and fabrics;

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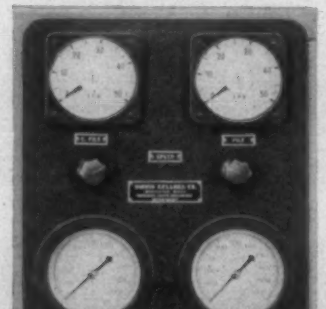

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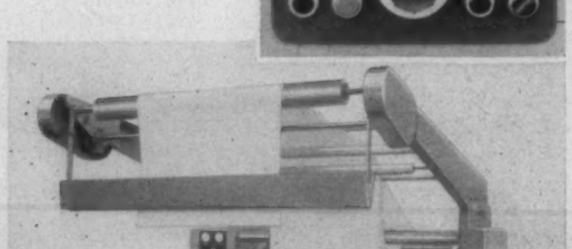

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the method selected eventually was a compromise and one in which attempts were made to combine the advantages of both systems without incurring the disadvantages of either. For a number of years, therefore, dyers have been using mixtures of disperse and neutral acid types for dyeing filament nylon and have labored between the devil of colorfastness and the deep blue sea of levelness to the complete satisfaction of no one. The net result has been that, although nylon has been in the textile field for 17 years, it can be truthfully said that at no time has the dyeing been worthy of the fiber. On the one hand, we have had fabrics that, because of fiber properties, have been well able to withstand the rough and tumble of vigorous wear; but, on the other hand, have met with limited acceptance because of washfastness requirements contingent upon vigorous wear.

How many of us have had personal experience in observing that, whereas filament nylon blouses and lingerie have provided excellent lasting qualities but have been discarded because of loss of color to a point unacceptable to the wearer? Brightness of shade, which is so important in stimulating my lady's fancy, has been greatly limited by the need for using dispersed dyestuffs, whereas the acrylics have forged ahead in a number of fields where shade brilliance is important. How many of us have had difficulties with nylon half-hose where dark shades have bled freely even after numerous washings? The development of texturizing processes has greatly widened the scope of filament nylon products, but at the same time dyeing difficulties have been greatly increased. The consumer is not apt to regard second quality merchandise as being of any of his immediate concern, but from a factual standpoint, of necessity, first quality merchandise must carry the cost of seconds and in certain textile fields, particularly half-hose, seconds have run alarmingly high due to the lack of dyeing uniformity which manifested itself in rings and flashes. With the ever increasing colorfastness that has been developing on other fibers, both natural and synthetic, filament nylon has been at an extreme disadvantage from this competitive standpoint and it became obvious that the situation could not be permitted to continue if nylon, in the apparel field, were not to be seriously handicapped.

Because of the Chemstrand Corp.'s great interest in filament nylon, it obviously became a matter of primary importance that the aforementioned difficulties be overcome and you may well be interested in the organization and means developed for dealing with the problem almost 18 months ago.

A team consisting of a dyeing scientist, an application chemist, a plant chemist and dyer, with several assistants, was organized based on the premise that any finalized method must find acceptance on the part of each of these elements and that each one had much to contribute towards the development of a practical method that would work on a commercial scale. The scientist concerned himself with the study of dyeing mechanisms in relation to nylon fabrics and yarns containing dye level variation potentials from known causes. For example, a fabric was made with yarns containing streaky dyeing potential for reasons of variation in orientation brought about by stretching or relaxing under controlled conditions. Another study involved a deliberate and well considered chemical variation of the nylon itself insofar as amino and carboxylic end-groups were concerned to an extent not considered possible of reproduction under the normal control conditions of nylon manufacture. Still another study was based on streakiness deliberately induced by variations in the various texturizing processes.

Three main avenues of approach then presented themselves. The physical differentials could possibly be equalized by an attempt to remove the variations in fiber orientations by means of fiber swelling. A second approach lay in mordanting the variations in such a way that the mordant itself became the controlling factor in uniformity rather than the nylon. The third alternative was to consider the changing of the dyeing mechanism of dyestuffs known to have good fastness properties on nylon in such a way that they would more nearly conform to those of disperse dyestuffs which normally give excellent uniformity.

The dyer and the plant chemist rejected the first idea on the basis of cost and difficulties in handling. It was pointed out that the dyeing of filament nylon is a highly competitive operation and the cost incurred by the use of swelling agents, together with the extra processing required to remove them, would make such a process not commercially profitable. The application chemist rejected the second alternative on the basis of problems of control and, therefore, the scientist was left the last alternative.

The scientist's first approach was to determine by what means acid and direct dyestuffs known to possess good fastness on nylon could be precipitated from solution and then be redispersed. Precipitates based on excess acid were found to be of no value because of a redispersion under conditions of high acidity promoted a rapid dye strike and a multiplicity of dye spots and blotches. Precipitation by the addition of electrolytes proved quite impractical of application because of the effects of these salts on the dispersants and the extremely slow rate of dyeing made for extremely long dyeing times and limited build-up in shade. A wide variety of cationic materials including quarternary ammonium salts was studied in relation to their ability to precipitate direct and acid dyestuffs in such a way as to be subsequently redispersable. A number of these types of material were evaluated with great degrees of differences in the kind of result obtained. Some of the precipitates became too highly aggregated such as to cause color spotting. Other types of precipitate provided a particle size too great to permit effective penetration, still other types of precipitate would cause a rapid plating of the surface of the fiber without effective penetration.

It was from this welter of confusing results and using the microdyeoscope as a tool that the dyeing scientist was able to determine the precise type of redispersable precipitate that would dye filament nylon to cover non-uniformities within commercial dyeing times. Another factor that had to be taken into consideration was that many of the materials used had an adverse effect upon lightfastness and this problem posed a stumbling block for many weeks. When what appeared to be the ideal type of dispersion was obtained, consideration then had to be given to problems which were encountered in governing rates of dyeing. Evaluation of 220 direct and acid dyestuffs developed the information that approximately 35 could be applicable to filament nylon by what was now known as the Chem-nyle process. However, there were three separate and distinct groups of dyestuffs within the first 35 that could be classified as rapid, medium and slow dyeing and although, by now, excellent self shades were being obtained that indicated freedom from

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streaks and flashes the problem of tertiary combinations still remained unsolved. Considerable study was, therefore, given to the selection of dyestuffs with similar dyeing rates under the conditions of the Chem-nyle system of dyeing and as a result of this study, a full color range was developed that may be applied to filament nylon using tertiary combinations whose constituent parts draw at the same rate. Using the selected combinations of dyestuffs which could be all acid colors or all direct colors, or mixtures of each, and under standard conditions of pH, a full shade range of shades with freedom from the usual streakiness and with the kind of colorfastness normally associated with those dyestuffs on nylon became available. It should be pointed out that Chem-nyle process *per se* does not improve colorfastness but permits the application to filament nylon of many of those dyestuffs which normally have good fastness properties but which dye in non-uniform fashion.

At this juncture, it became obvious that the rapidly developing process had remarkable commercial possibilities and for purpose of commercial reference the name of Chem-nyle was given to the process.

Reduction to commercial practice was carried out on production scale on shades selected by dyers as those normally presenting major difficulty insofar as uniformity was concerned.

The results of the first production trials entirely confirmed laboratory findings and it became obvious that the commercial aspects of the process were far reaching in the extreme. Not only was the colorfastness of filament nylon dyed goods going to be radically increased but also color styling had become a factor based on the availability of brilliant colorings provided by acid dyestuffs formerly not usable because of non-uniform dyeing properties. The question of seconds due to non-uniform dyeing also came into consideration which, combined with the other advantages, emphasized the potential impact of the Chem-nyle process on filament nylon from a commercial standpoint.

A summation of the results obtained from the Chem-nyle process thus far shows that: (1) Streakiness normally associated with dyestuffs other than disperse types has been virtually eliminated in many cases and reduced to an acceptable minimum in others. (2) Good washfastness has been obtained at 120 to 140°F. on the basis of a normal dyeing which can be boosted to 160°F. by aftertreatments. Many chrome dyestuffs yield excellent washfastness at 160°F. (3) Lightfastness is that normally associated with acid and direct dyestuffs on nylon and ranges between 15 to 80 hours. Selected chrome dyestuffs give lightfastness ranging from 40 to 80 hours, depending upon shade. (4) Shades of a brilliance not normally associated with filament nylon may be obtained. (5) The hand and touch of goods dyed by the Chem-nyle process is of a softer, fuller and more rounded nature than by normal methods.

The Chem-nyle method of dyeing is of an extremely simple nature and requires no profound technical knowledge for its application. The filament nylon goods, in whatever form they may be, are prepared conventionally. They are then treated for a period of ten minutes in from two to three per cent Chem-nyle dyeing assistant, two per cent Triton X-67 and formic acid to provide a pH of approximately 3.5 per cent. The recommended dyestuff solution is added to the bath and the dyeing is carried out at 190 to 200°F. in conventional fashion. After color matching, the dyeing is washed off at 160°F. and if 160°F. washfastness is required, the goods should be aftertreated in the recommended fixing agent for the specific dyestuffs. Katanol 0-50 and Chromofix B are among those found to be of advantage. Chrome dyestuffs may be used to great advantage in shades ranging from light medium to black. The colors are chromed by conventional methods to give good washfastness at temperatures ranging from 160°F. to the boil.

The question of dyestuff selection is of paramount importance, for it has been established that there are what may be classified as slow, medium and fast drawing colors and, although it is preferable to use dyestuffs from a given classification mixtures of slow and medium, and medium and fast drawing types are permissible. Interestingly, rates of drawing of individual dyestuffs may be entirely different under Chem-nyle conditions from those under normal dyeing conditions and it is also interesting to note that all types of the selected dyestuffs which may be direct, milling or acid dyestuffs are applied from the same amount of formic acid.

Dyestuff selection is also very important from the standpoint of colorfastness, both to light and washing, and it should be pointed out that the use of the Chem-nyle process is not an automatic guarantee of good fastness. The dyestuffs suggested are those which careful research has shown to possess the listed properties. Prototypes may conceivably work equally well but it is stressed that standardizing materials may adversely affect results.

Work up to this point shows without equivocation that wetfastness of a very high order is produced on filament nylon. Lightfastness up to this point is equivalent to that normally produced on nylon with the types of dyestuffs listed which are, of course, superior to disperse types. In the main, thus far, it can be said that selected chrome-type dyestuffs give lightfastness from 20 to 100 Fade-Ometer hours. Unfortunately neutral dyeing premetalized types have not been found to be capable of application by the Chem-nyle method.

Certain optical bleaches may be applied by the Chem-nyle process to give extremely uniform results, whereas application under normal conditions showed the same non-uniformities associated with acid dyestuffs. This development may also have far-reaching importance as whites have hitherto presented serious problems.

That the dyeing industry was eagerly waiting for such a development is shown by the fact that over 100 dyeing and finishing companies have already make application for a license to use the Chem-nyle process and it is believed that the formalities connected with licensing are almost completed, at which point Chemstrand dyeing technicians will be available for plant demonstrations. The dyeing assistant will be made available at a cost of approximately 40 cents per pound in drum quantities.

Durene Association Elects Donald R. Jonas

Donald R. Jonas, vice-president of Spinners Processing Co., a division of Johnston Mills Co., has been elected president of the Durene Association of America. R. D. Hall Jr., general manager of the yarn division of The American Thread Co., was named vice-president, and Joseph P. Holt, president of Aberfoyle Mfg. Co., was re-elected treasurer. A. C. Layton Newsom was re-elected executive secretary.

Far-Infrared Heating in Textile Processing

By RUSSELL RANSON, Ranson, Wallace & Co., Charlotte, N. C.
— Representing Edwin L. Wiegand Co., Pittsburgh, Pa. —

This article is abstracted from a paper presented by Mr. Ranson before the National Industrial Electric Heating Conference last year.

IN many textile processes requiring the application of heat, the nature of the application is such that contact-free heating must be performed. Therefore, although heat may be applied by conduction, or convection, or radiation, the latter two methods—that is, convection and radiation—offer interesting possibilities. Due to the high heat insulating properties of a blanket of air around the material which is to be heated in a textile application—such as a woven piece of cloth—gravity convection becomes exceedingly slow and this method becomes more and more inconsistent with economy and ineffective as operating speeds are increased.

Forced convection of heated air directed at the material to be heated assists in breaking up the blanket of insulating air, but this has a number of disadvantages such as requiring blowers for the air, duct work, enclosures, and adequate protection against blowing dust and foreign material against the textile product that is to be heated. Also, unless the forced convection of heated air is recirculated, it must be discharged with consequent loss of heat energy.

Heating the textile material by radiation is relatively new so far as widespread applications are concerned and offers many advantages—particularly if far-infrared electric radiant heaters are used. Slow convection heating will require a relatively long time to heat a material in a textile application to a certain temperature, whereas fast far-infrared electric radiant heat will heat the same textile material in a much shorter time. The time saved may be as much as 85 per cent, thereby resulting in lower production costs, higher production output, and higher production speeds.

"Far-infrared" is accepted terminology for radiation in the longer wave length, invisible portion of the electromagnetic spectrum. It is associated with radiation temperatures from approximately 600°F. to approximately 1,500°F. These temperatures correspond to heat intensity wave lengths of approximately five microns and three microns, respectively. In this range of wave length, the radiation is invisible and practically all liquids and solids are opaque to it, although it is transmitted without loss by gases. Metal sheathed electric heaters can be made to operate continuously over long periods of time at temperatures up to 1,500°F., thereby providing a very reliable and highly satisfactory source of high output far-infrared radiant heat.

Compare the radiation from a metal sheathed electric heater providing far-infrared radiation and that from a typical lamp providing near-infrared radiation. The peak energy radiation from the metal sheathed electric heater is of such a wave length that a very small amount of the energy is in the nature of a visible light (which does very little good for heating and drying applications), but rather the energy is actually more advantageously converted to heat in the material which is to be heated. A further advantage of the far-infrared radiant heat is that it is relatively insensitive to color, and materials of practically all colors are heated to a nearly similar degree by the available energy. On the other hand, in the case of the near-infrared radiation source, the peak energy is located near the visible light area and therefore a very considerable amount of the energy is transformed into light, which has relatively small heating value. Furthermore, this near-infrared radiation is relatively sensitive to different colors, and therefore, materials of different colors will be heated in a non-uniform manner by the near-infrared radiation.

One of the interesting factors contributing to the economy of the application of electric radiant heating is the fact that radiation falling on a surface opaque to it is immediately transformed into heat. The surface of the opaque material (and by thermal conduction, the internal body of that material) is heated to a temperature above that of the surrounding air and without the necessity for expending energy in heating the surrounding air.

This peculiar ability of being able to heat the work above the temperature of the surrounding air and without heating the surrounding air is an important factor in contributing to the economy and effectiveness of electric radiant heating applications. Furthermore, these desirable and useful properties are more pronounced when a far-infrared radiant heater source is used than when a source is used that provides radiation in the near-infrared ragion.

Far-infrared metal sheathed electric radiant heaters providing these desirable application features are today available in a number of standard sizes and ratings. Such heaters are designed so that they can be ganged together to form banks of almost any size and shape to fit the particular application at hand. Metal sheathed tubular electric heaters mounted in panel form are available in sizes up to two feet by 5½ feet per unit panel and the design is such that any number of panels may be assembled together in building block form to make a bank or oven of practically any desired size and rating.

Regardless of the advantages to be derived from the use of far-infrared electric radiant heaters in textile applications, the use would be seriously limited if the operating cost were relatively high as compared with other means of accomplishing the same or similar application results. Traditionally, the widely held point of view has been that "electric heat is expensive heat." Realizing that this belief would seriously handicap the use of electric heating in the textile industry unless ways and means could be found for applying the electric heating equipment to better advantage and so that higher operating efficiencies could be obtained or more effective results could be obtained, a research project was set up and sponsored at the College of Engineering at Duke University late in 1952. The principal purpose of this research project was to investigate the use of electric far-infrared radiant heaters for the purpose of the many drying applications in the textile industry to find ways and means for doing such jobs at a reasonable operating cost. Essentially, test samples of various kinds of fabrics were weighed after having been wet to a pre-determined percentage of moisture content. The test sample would then be exposed to the electric source of far-infrared radiant heat and the change in weight due to evaporation of the moisture with the passing of time would be permanently recorded by means of a moving picture being taken simultaneously of a set of scales that was continuously weighing the test sample and a sweep second clock that gave a record of time. These tests were carried on for approximately two years and during that time many different sources of radiant heat were used and various and sundry arrangements were incorporated in an effort to determine what was the most efficient source of heating energy and also what was the most efficient way to use this source of heat energy. There is a very wide difference in the over-all results that will be obtained depending upon just what source of heat energy is used and just how it is applied.

As a result of the vast amount of information that was accumulated during the two years of investigation during this research project, a number of empirically derived equations are available from which very accurate calculations can be made of what results might be expected when far-infrared electric heaters are used in various textile drying applications. Without going into the details of these equations, it is important to point out that as a result of the information obtained during this research project the kilowatt capacity required to do a given textile drying job now is in the order of one-third of the installed KW capacity that would have been recommended prior to this research project. This, of course, is on the basis that full advantage is taken of all of the information that was obtained from the research project. This means that now the installed KW capacity need be only in the order of one-third that which would have been recommended prior to 1952 and also it means that the operating cost for a given textile drying application is in the order of only one-third what it would have been prior to 1952.

Fig. 1 shows graphically a comparison in the cost of water evaporation with far-infrared radiant heaters used as a source of heat compared with steam as a source of heat. It will be recognized that the basis of comparison will vary considerably depending upon both the operating and cost conditions for steam and the operating and cost conditions for electricity. The right-hand set of curves apply to steam operations and curves are shown for three different steam rates. A steam rate of two pounds of steam per pound of evaporation is definitely on the low side. A steam rate of two and one-half pounds per pound of evaporation would certainly be a fair rate for the steam operation inasmuch as some large mills use as much as three and one-half pounds of steam for each pound of evaporation. Also the evaluation of the cost of steam in cents per thousand pounds will vary from one mill to another depending upon their accounting procedure and how much they take into consideration steam losses in their lines and whether they measure the steam rate at the boiler or where it is utilized on the textile machine. A steam cost of seventy-five cents per thousand pounds seems to be realistic. The three curves on the left-hand side of Fig. 1 represent various levels of economy of the utilization of the radiant heat for evaporation expressed in terms of KWH of electrical energy per pound of evaporation. The three different curves represent the range of application possibilities taking advantage of all of the information obtained during the research project at Duke University and whether or not the moisture in the textile material is at an elevated temperature or at room temperature when it enters the drying machine. In by far most textile applications the moisture is at a considerably elevated temperature when it enters the drying machine due to the previous process and therefore the curve representing 0.250 KWH per pound of evaporation is typical of actual production practice. As a matter of fact, even better economy has been obtained in many production applications. By comparing the graphically portrayed information in Fig. 1, it will be seen that the operating cost of far-infrared electric radiant heaters will be strictly competitive with steam if the steam cost is 75 cents per thousand pounds and if the electrical energy cost is at seven and one-half mils. This is very important because it shows quite conclusively that it is possible to have the operating cost for electrically operated drying equipment competitive with the operating cost for steam and there are many other advantages in favor of the electric operations that will be pointed out later. Under the operating conditions as outlined, the actual cost for evaporating a pound of moisture is approximately 0.18 cents. Putting this another way, five and one-half pounds of moisture can be evaporated for a penny.

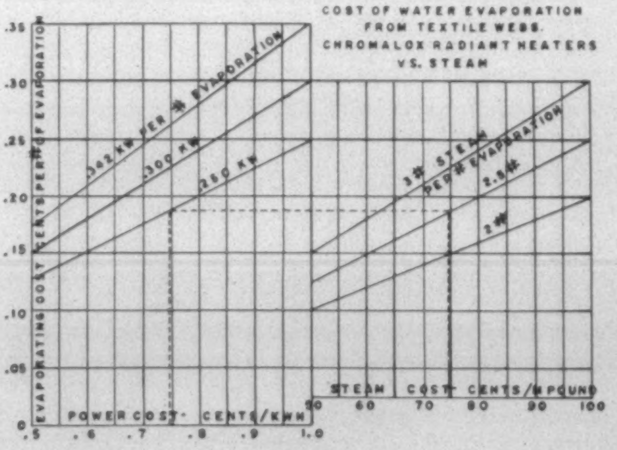

Fig. 1.

The promise for lower operating cost for the use of electric far-infrared radiant heaters has resulted in many recent installations that are both interesting in themselves and because similar widespread installations throughout the textile industry will undoubtedly be made in the near future. A brief description of some of these installations and applications will be of interest and will undoubtedly suggest other possibilities.

A typical textile finishing plant in North Carolina had a production bottleneck on a steam-heated loop dryer that followed a dyeing range. The steam-heated loop dryer had a capacity to dry 900 pounds of water per hour and was approximately 50 feet long and located overhead. The textile finishing company wanted to increase its drying capacity by 25 per cent but the arrangement of the building was such that it was practically impossible to increase the length or size of the loop dryer. Fig. 2 shows how a bank of far-infrared electric radiant heating panels were located ahead of the steam-heated loop dryer as a booster heater, and required less than four feet of space in the length direction of the installation. The installed capacity was 86.4 KW and this increased the drying capacity from 900 pounds of water per hour to 1,284 pounds of water per hour. This is an increase in drying capacity of 42.7 per cent. This installation required only 0.225 kilowatt hours per pound of water of increased drying capacity.

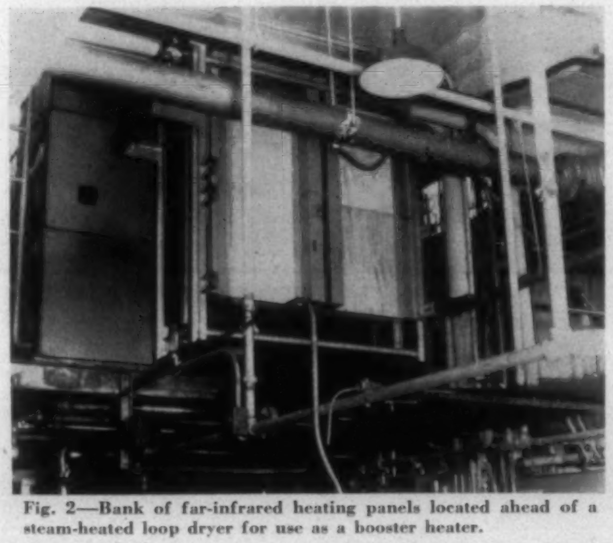

Fig. 2—Bank of far-infrared heating panels located ahead of a steam-heated loop dryer for use as a booster heater.

A large and well-known weaving plant with a contract for supplying upholstery material for Lincoln automobiles was limited on its production output by the available capacity in its slashers. To obtain additional slashers was out of the question because of long delivery, space for additional slashers not being available in existing buildings, and the fact that the cost of a new slasher would be between $30,000 and $35,000. Far-infrared electric radiant heaters were supplied in the form of a Heat-Pack especially engineered and built for installation on slashers. Rolls are provided at both the bottom and the top of the Heat-Pack so that the sheet of ends enters at the bottom and also leaves at the bottom after having made a double pass between opposite banks of far-infrared radiant heaters assembled facing each other. Provision is included for automatically rotating the heaters away from the work if the machine is stopped for any reason, thereby preventing burning of the material by the intense heat. Fig. 3 shows how the Heat-Pack was assembled between the size box and the first steam-heated drying can on the slasher without making any alterations in the assembly or location of the various sections of the slashers. This is a very important consideration because practically all of the space that is required for the radiant heaters is in a vertical direction, and such space is usually available whereas space in a horizontal direction is very much at a premium.

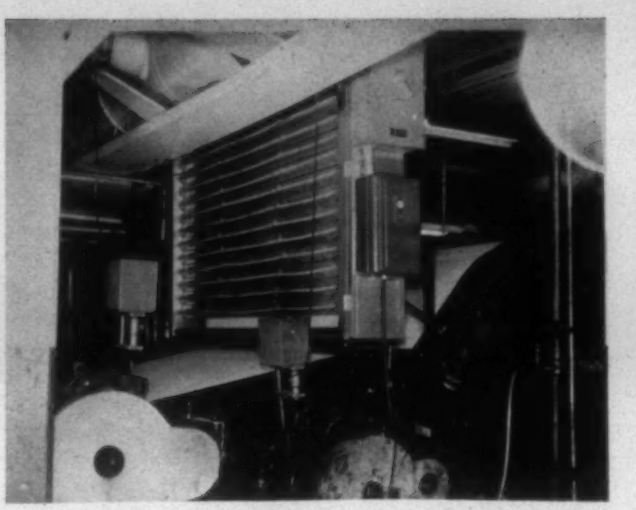

Fig. 3—Heat-Pack is located between the size box and the first steam-heated drying can without requiring relocation of any slasher components.

The installation was made in less than half a working day. The total installed capacity is 108 KW at 575 volts, three-phase. As mentioned previously, the cost of a new slasher would be at least $30,000. The cost of the entire Heat-Pack was approximately $5,000 and its use as a booster on an existing slasher increased the production by 50 per cent. It should also be pointed out that in addition to increasing the production capacity, the far-infrared radiant heating equipment increases the quality of the production by accomplishing partial drying of the sizing on the ends before they hit the first drying can. Because the ends are partially dry before hitting the first drying can, they do not stick together, and also they do not flatten as much when pressed against the drying cans but rather each end remains more nearly circular in cross sections. Both of these factors result in better quality yarn for the weaving operation which follows the slasher.

Tenter frames are used for a wide variety of purposes in textile finishing plants. In years passed, the principle use of a tenter frame was to dry cloth or to stretch it smooth or to a desirable width dimension. However, in more recent years with the wider use of synthetic materials and fabric coatings such as resins, silicones, latex, etc., the tenter frame has found wide-spread use as a means for curing synthetic coatings and heat setting synthetic yarns. Far-infrared electric radiant heaters are ideally suited as a source of very intense heat to perform these many and varied functions on a tenter. Enclosed tenters are capable of doing a wider variety of functions when heat is required, because the enclosure serves the purpose of containing the heat generated. However, very little detail can be seen of an enclosed tenter while it is in operation because the enclosure prevents observation of the working parts and the temperature on the inside of the enclosure is usually so high as to preclude more than a glance of a few seconds inside one of the doors. Fig. 4 shows a close-up of a bank of 12 far-infrared electric radiant heaters mounted over the fabric and focusing the radiation in the direction of the fabric material. The individual heaters are pivoted and the mounting shaft at the end of each heater is provided with a pinion which mates with a gear rack for the purpose of rotating the heaters away from the fabric material if the tenter should be stopped for any reason. This is to prevent burning of the fabric.

Open tenters with far-infrared electric radiant heaters installed are usually used when synthetic coatings that have been applied to the fabric material are to be cured and to a limited degree when very lightweight materials are to be dried or heat set. For more universal drying of a variety of different weight materials and also for heat setting of heavier synthetic materials, a higher concentration of far-infrared electric heaters in an enclosed tenter frame is usually required. The Heat-Pack completely surrounds the tenter frame with one bank of heaters above the fabric and another bank of heaters below the fabric. Heaters are rotated so as to focus the radiation against the fabric when the tenter is running, and to focus the radiation away from the fabric when the tenter stops so as to prevent burning of the fabric.

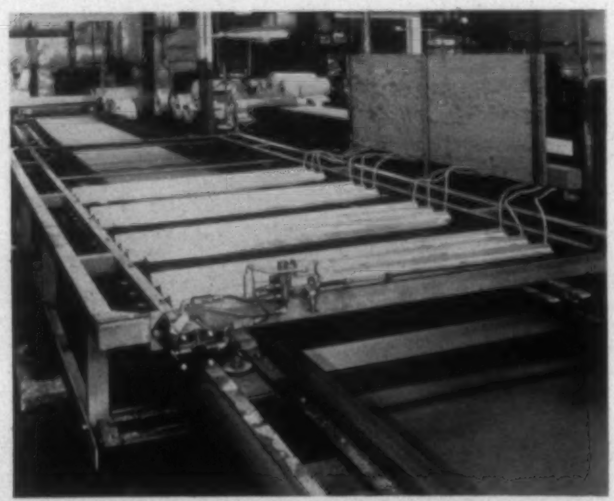

Fig. 4—Bank of far-infrared electric radiant heaters focus radiation in the direction of fabric moving through tenter frame.

Equipment like that just described was installed first on an open tenter in a finishing plant. With an installed capacity of 94 KW, 70-denier Dacron marquisette having 52 ends and 34 picks (lightweight and open-weave material) could be dried from approximately 100 per cent moisture content down to approximately seven per cent moisture content at approximately 90 yards per minute. Since the heating equipment was assembled into a space of approximately nine feet in length, this means that the drying was accomplished with the material exposed to the heated zone for only approximately two seconds.

When heavier and closer weave nylon was run through the same machine as previously referred to, satisfactory drying could be obtained at 45 yards per minute before the enclosing box was added to the tenter frame. After the same installation has an enclosing box added to the tenter frame, this same nylon material can be satisfactorily dried at approximately 70 yards per minute, thereby showing the benefit of the enclosing box.

This same installation after the enclosing box had been added is also used for heat setting synthetics. For such application the material starts through the tenter dry and the purpose is to elevate the temperature for the purpose of stabilizing or heat setting the synthetic yarns. When nylon cloth is run through the machine at the rate of 42 yards per minute, the time of exposure in the heated zone is slightly over four seconds and the nylon is raised to a temperature of 320°F. When the nylon is run at 60 yards per minute, the time of exposure in the heated zone is three seconds and the temperature of the nylon is raised to approximately 275°F.

A large finishing plant in North Carolina has an enclosed tenter equipped with far infrared electric radiant heaters. In this case, the installed capacity is 187 KW divided into three sections, each of which can be independently controlled by a modulating thermostat to take care of a variety of application conditions. This particular plant runs mostly men's suiting material made from various blends of nylon, Dacron, wool, etc. This equipment is used both for booster drying to increase the drying capacity of the hot air heated tenter and also for heat setting or setting or stabilizing of the synthetic yarns. The total length of the tenter frame is 120 feet, approximately 110 feet of which is enclosed. One section of the enclosure ten feet long is devoted to the assembly of the far-infrared electric radiant heating equipment and the remaining approximately 100 feet of the original hot air heated enclosure remains as originally installed. On drying applications the maximum speed that could be obtained prior to the installation of the electric heating equipment was 50 yards per minute. After the installation of the far-infrared electric radiant heating equipment the speed has been increased to 70 yards per minute—or an increase in production of 40 per cent.

This same installation is also being used for heat setting. Prior to this installation it was necessary to dry the fabric on the tenter frame and then take it to another machine located elsewhere in the plant for the heat setting function. This other machine consisted of a series of gas fired drying cans. The initial cost of the machine was approximately $17,000 and it could heat set the material at the rate of 18 yards per minute. Now that the far-infrared electric radiant heating equipment costing approximately $7,000 has been added to the tenter, the drying and the heat setting can be performed on the same machine without extra handling at 40 yards per minute.

Several references have been made to heat setting synthetic yarn after it has been woven into cloth. There are many applications of electric heat for heat setting synthetic yarn before it is woven into the cloth. There are many ways that the electric heat can be applied to the yarn, some of which involve contact between the yarn and the heaters. However, in most applications it is desirable to avoid such contact and this points towards the use of far-infrared electric radiant heaters again. One very successful installation consists simply of a bank of far-infrared radiant panels in front of which the yarn is passed under a desirable amount of tension. Even very heavyweight synthetic yarn can be very satisfactorily heat set with an exposure time to the heated zone in the order of two seconds.

Two applications involving looms will be of interest. In some mills and under certain conditions the warp beam may not have uniform moisture content when it is put on the loom. That is to say, there may be relatively wet spots spaced around the beam or the general level of moisture content of the entire beam may be higher than would be desirable for weaving. The installation of a far-infrared heater in such a position that the radiation is directed at the warp ends as they leave the beam going onto the loom does a good job in drying out excess moisture. Care must be exercised to avoid directing excessively intense heat at the warp ends because the travel is at a very low rate and excessive drying and burning must be guarded against.

Another application on looms has to do with the setting of open weaves. This has nothing to do with heat setting of synthetic material but rather has to do with maintaining the dimensional stability of fabric with extremely open weaving. In this case the radiant heaters can be used to effectively "tack weld" each intersection of yarn in the open weave when certain yarns are being used. In this case, the far-infrared radiant heaters are placed so as to direct the radiation against the yarn after the weaving has been completed; whereas, in the application described previously the heat was applied to yarn before weaving.

Since the output of a loom travels at a relatively low speed, the disadvantage of contact application of heat are not as marked as would be the case in other textile applications where the speed of travel of the product is greater. For this reason, material such as nylon ribbon can be very satisfactorily heat set as it leaves a loom by bringing it in contact with a metal shoe that is heated by a cartridge heater or a strip heater clamped to the metal shoe. The temperature of the shoe should be closely controlled by adjustable thermostatic means since for different synthetic materials different temperatures between the range of 240 and 400°F. should be maintained. The main purpose of this type of heat setting is not primarily to give dimensional stability to the yarn itself but rather to give dimensional stability to the completely woven tape or ribbon which might otherwise twist out of shape. Again the heat setting effectively seals adjacent ends of yarn in the proper relationship to each other, so that the pattern of weave as determined on the loom is maintained after the material leaves the loom.

On certain patterns of material the designers of the fabric desire to have a bright sheen for decorative purposes. This characteristic can be very satisfactorily obtained by passing the fabric very quickly over a very hot calender roll which is being moved in the direction opposite to the direction of the travel of the fabric, thereby imparting an ironing action to the fabric. The temperatures that are required to satisfactorily form this operation are in excess of the temperatures that can be obtained with the usually available steam pressures. This is a natural for electrically heated calender rolls. The electrically generated heat has been successfully applied in a variety of ways. Some have used cartridge heaters or strip heaters attached to the calender roll. These methods usually require an undesirable commutator to direct the current to the heaters. The use of radiant heaters either external to the calender roll or internal of the calender roll offers many advantages of simplicity and effectiveness. The same or similar comments would apply to many potential applications involving embossing of fabrics, usually after some kind of synthetic coating has been applied to the fabric.

In general, it can be said that usually the initial cost of far-infrared electric radiant heating equipment for use in textile application is considerably less than the initial cost of other types of heating equipment for the same application. Usually the space requirement for the electric equipment is less than for other types of heating equipment and the installation cost is usually far less for the electric equipment. The accuracy of control and the ability to duplicate control conditions repetitively are very much in favor of the electric equipment. Now that ways have been found to apply far-infrared electric radiant heaters so that operating costs will be favorable as compared with other sources of heat, it is to be expected that there is to be a tremendous swing towards the use of electric heat for a wide variety of applications in the textile industry in the years ahead.

Heat Control Important In Cyanoethylation

A report of processing conditions found necessary to assure uniform cyanoethylation of cotton yarns and fabrics has been published recently by scientific workers at the Southern Utilization Research Branch of the Agricultural Research Service, U.S.D.A., in New Orleans, La. The investigation was prompted by increasing interest in the use of cyanoethylation to improve mechanical and dyeing characteristics of such yarns and fabrics and increase their resistance to rotting.

Results indicate that local overheating during the reaction is one of the principal causes of uneven treatment. It was also found that moisture content of the reagent is an important factor, and that for best results the reagent should be evenly applied to the material being treated.

The research workers developed a pilot plant apparatus especially adapted to provide the required conditions, and permit treatment of 50-yard rolls of 80-square cotton fabric. Thermocouples placed within the roll were used to direct temperature control and valves permitted alternate reversal of the reagent flow to maintain a more uniform temperature. It was found that by careful control of these various factors, the degree of cyanoethylation could be held within a very narrow range of nitrogen content in the finished product, and treatment be kept uniform.

A schematic diagram of the pilot plant, details of the process, and results of the experiments are given in "Cyanoethylation of Cotton Fabric," by Lucien H. Greathouse, H. J. Janssen, W. N. Berard and C. H. Haydel, published in *Industrial and Engineering Chemistry* for August 1956. Reprints may be obtained without cost from the Southern Utilization Research Branch, 1100 Robert E. Lee Blvd., New Orleans 19, La.

Materials Handling Show Next Spring

The seventh national Materials Handling Exposition, the original show in this field established in 1947, will be held at Convention Hall, Philadelphia, April 29 through May 3. The last show was held in Chicago two years ago.

Concurrently with the show, the American Material Handling Society, whose membership consists of executives of firms which use various types of materials handling equipment, will conduct an extensive conference to discuss new developments in handling methods, it was announced by Herbert S. Jones, of Dominion Bridge Co. Ltd., Montreal, society president. The society also will hold its annual banquet during the show period and will present its annual honors and awards at that time.

The show will be the broadest and most comprehensive ever undertaken in the field. More than 100 different types of materials handling equipment will be demonstrated.

Theme for the 1957 show will be "Materials Handling, Key to Automation." More than 180 companies, already have reserved space for exhibits and the total is expected to exceed 250, according to Clapp & Poliak Inc., exposition management.

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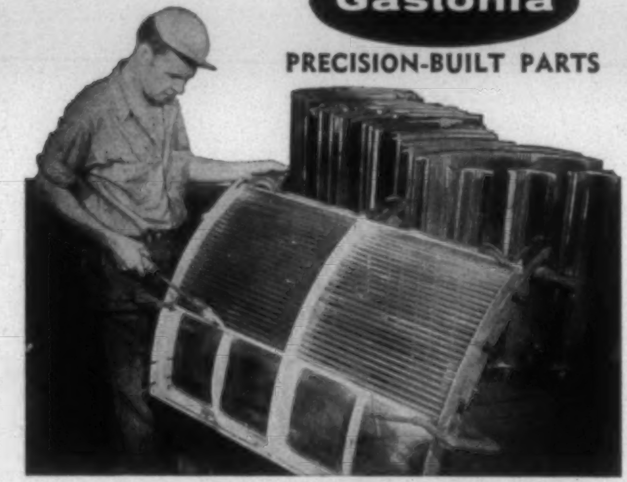

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PERSONAL NEWS

John P. Norman

John P. Norman has been appointed sales representative for R. E. L. Holt Jr. & Associates Inc., manufacturers' representative of Greensboro, N. C. Mr. Norman, who will make his headquarters in West Point, Ga., will cover the company's Georgia and Alabama territory. For the past five years, Mr Norman has been associated with West Point Mfg. Co., the last three years as director of personnel of the Lanett (Ala.) Bleachery and Dye Works Division of the company. He is a native of Columbus, Ga., and a graduate of Emory University.

Robert C. Myers has been appointed manager of packaging sales of the film department, the Du Pont Co., Wilmington, Del., succeeding Warren J. Harte, who died Nov. 4. . . . J. T. Axon has been named to succeed Ronald C. Davis as Southern district manager of packaging sales with headquarters in Atlanta, Ga.

Walter M. Mitchell, vice-president of Draper Corp., Atlanta, Ga., has been reappointed chairman of the board of the Federal Reserve Bank of Atlanta for 1957. Mr. Mitchell served as chairman last year.

B. G. Davenport has resigned as plant engineer for Excelsior Mills, Union, S. C., to accept a position with the industrial sales division of Westinghouse Electric Corp. Mr. Davenport is a graduate of Georgia Tech.

James Neal Jones, a traffic consultant of Jackson, Tenn., has been named traffic manager for Dyersburg (Tenn.) Cotton Products Inc. He succeeds Bill Scott Walker, who resigned Dec. 1 to accept a post with the Illinois Central Railroad.

James A. Chapman Jr., vice-president of Inman (S. C.) Mills, has been elected to the board of directors of the South Carolina State Chamber of Commerce. Mr. Chapman is immediate past president of the Southern Textile Association, and is now serving as chairman of the board of governors of that organization.

William H. Ruffin, president of Erwin Mills Inc., Durham, N. C., has been inducted as an honorary member of the Duke University National Council, a representative body of alumni, faculty and friends. Mr. Ruffin, a graduate of the University of North Carolina, is immediate past chairman of the Duke-Durham Fund.

Herbert A. Burow retired Dec. 31 as manager of Bonham (Tex.) Cotton Mills after 21 years at the post. Mr. Burow, who was also a member of the executive committee of Brenham (Tex.) Cotton Mill Inc., began his textile career in 1922 after graduation from Texas A. & M. College. He became superintendent of Bonham Cotton Mills in 1928 after working in various departments. He held that position until 1935 when he was named manager. Mr. Burow has served two years as a director of the Cotton-Textile Institute and one as a director of the American Cotton Manufacturers Institute. He has been secretary-treasurer of the Texas Cotton Manufacturers Association the past 20 years. During World War II, he was on the National Advisory Committee on Textiles in Washington. He also was an industry member on the Regional War Labor Board in Dallas, Tex. In 1947-48 he was president of the Texas Manufacturers Association, a group he was instrumental in organizing.

Joseph P. Carter has been named superintendent of Spartan Mills, Startex Division, Startex, S. C. Mr. Carter, who has been assistant superintendent of the division almost 11 years, succeeds the late W. M. Allison.

John A. Lyons has retired as vice-president of Orr Mills, Anderson, S. C., a division of M. Lowenstein & Sons Inc., after 56 years with the firm. A surprise birthday and retirement party was given in his honor Dec. 23, and his textile career was recited to the some 1,800 friends, relatives and business associates gathered for the occasion. Mr. Lyons, who is 85, joined Orr Mills when it was built 56 years ago. Prior to that he had been with the former Piedmont Mills for 19 years. . . . Also retiring Jan. 1 was Archie Cathcart, controller at Orr Mill for the past 32 years. He has been succeeded by William K. Chapman, his assistant for the past four years.

Guy Branch has been named agent of Abbot Worsted Co., Seneca, S. C., succeeding Herman A. Sayles who resigned.

James H. Hunter has been elected president of James Hunter Machine Co., North Adams, Mass., to succeed his father, the late James T. Hunter. Ernest L. Ward has been elected to the board to succeed the late Mr. Hunter. Richard A. Hunter, brother of the president, was re-elected a vice-president, and Carl Kemp was renamed secretary-treasurer. The new president is the fifth James Hunter to head the 109-year-old firm.

W. E. Dunn, general superintendent of Huntsville (Ala.) Mfg. Co., a division of M. Lowenstein & Sons Inc., has been promoted to vice-president and manager of the company. He succeeds A. D. Elliott who is retiring because of ill health. Mr. Dunn was superintendent of Deering, Milliken's Monarch Mills at Union, S. C., prior to joining Huntsville Mfg. in 1954.

William H. Grier, executive vice-president of Rock Hill (S. C.) Printing & Finishing Co., a division of M. Lowenstein & Sons Inc., has been reappointed as a member of the board of the Charlotte, N. C., branch of the Fifth District Federal Reserve Bank. Mr. Grier will serve a three-year term.

John Henrikson

John Henrikson has been appointed vice-president in charge of sales of the Graton & Knight Co. of Worcester, Mass., one of the country's largest manufacturers of leather products for textile industry. Mr. Henrikson, who joined Graton & Knight in 1917, was appointed assistant sales manager in 1949 and sales manager in 1954.

John L. West has joined Callaway Mills Co. as plant engineer at its Manchester, Ga., plant. Mr. West was formerly overseer of spinning with Chiquola Mfg. Co., Honea Path, S. C. He is a graduate of Georgia Tech.

Dr. Joseph B. Quig, research manager in the textile research division of the Du Pont Co., will retire Jan. 31 after 31 years with the company. Dr. Quig joined the company in 1926 as a technical assistant in rayon manufacture at the firm's Old Hickory, Tenn., plant. From 1928 to 1942, he was manager of customer service for Du Pont rayon and acetate. He served as assistant director of development in the rayon technical division between 1942 and 1950. With the reorganization of the rayon department as the textile fibers department in 1952, he was named research manager in the textile research division.

A. U. (Buck) Priester Jr., who played football at Clemson College in 1930-31-32 and is now vice-president and general manager of the Hillcrest Division of Callaway Mills Co., LaGrange, Ga., was named last month to the Silver Anniversary All-America football team compiled by *Sports Illustrated* magazine. The team is comprised of football stars of 25 years ago who have gained prominence in professional and community affairs. Mr. Priester joined Callaway following graduation from Clemson.

William G. Lord and M. Weldon Rogers have been elected to the board of directors of Burlington Industries. Mr. Rogers, who was named to fill the vacancy created by the resignation of E. P. Cave, is president of Ely & Walker. Mr. Lord is president of Galey & Lord. Both companies are member organizations of Burlington Industries. Mr. Lord has been with Galey & Lord since 1923 and was named president of that organization in March 1947. He is a native of New York and currently resides in New York City. Mr. Rogers joined Ely & Walker in 1945 as head of its textile mill operations. He was made a vice-president in 1949 and was named president in March 1954. He is a native of Rome, Ga., and resides in Webster Groves, Mo. . . . Thomas S. Tolar, president of Pacific Mills, another member company of Burlington Industries, has transferred his headquarters from Greensboro, N. C., to Halifax, Va. Pacific manufacturing operations include plants at Halifax, Brookneal, Drakes Branch and Clarksville, Va., Lawrence, Mass., and Carrboro, Lexington, Raeford, Oxford and Rhodhiss, N. C. . . . James R. Lathan has been transferred from Greensboro to Altavista, Va., to become manager of Altavista Weaving Co. William S. Manning of Greenville, S. C., has joined Burlington and will assume Mr. Lathan's duties as manager of the filament weaving division, which includes Bristol (Tenn.) Weaving Co.; Radford (Va.) Weaving Co.; and Vinton (Va.) Weaving Co. Mr. Lathan, a native of Monroe, N. C., has been with Burlington for 20 years, with headquarters in Greensboro for the past three years. He is a graduate of North Carolina State College. Mr. Manning formerly managed Kingsley Mill Corp. at Thomson, Ga., and earlier, Gayley Mill Corp. at Marietta, S. C. He is also a graduate of North Carolina State College. . . . Finley W. Stewart, formerly superintendent of Altavista Weaving Co., has been transferred to the Piedmont Heights Plant, Burlington, N. C., as superintendent.

E. G. McIver Jr. has been appointed assistant vice-president of manufacturing for Erwin Mills Inc., Durham, N. C. Mr. McIver will serve as assistant to Marchant C. Cottingham, vice-president of manufacturing, in the supervision of manufacturing operations of the company. Mr. McIver graduated from the University of North Carolina in 1935 and obtained a textile degree at North Carolina State College in 1936. He joined Erwin following graduation from N. C. State, and after working in various phases of the company's operations he served as superintendent of the No. 6 mill in Durham for two years. He then served as assistant manager of the company's Durham plants until 1956 when he was named assistant to Mr. Cottingham. . . . C. O'Neal Walker, manager of the Stonewall, Miss., division of Erwin, has been elected president of the Choctaw Area Boy Scout Council, Meridian, Miss.

John W. Bagwill has been named director of industrial and public relations for Cone Mills Corp., Greensboro, N. C. Mr. Bagwill was formerly with Fred Rudge Associates, a management consulting firm of New Canaan, Conn. The position is a newly-created one, and Mr. Bagwill will assist management in discharging its responsibility of serving equitably all the segments which have an interest in the welfare and continued development of the company. . . . Coley Phillips, superintendent of Cone's Revolution Division for the past 15 years, retired Jan. 1 and has been succeeded by J. Lennie Ritter. Mr. Phillips joined Cone Mills in 1908. He became assistant superintendent in 1930 and superintendent in 1941. Mr. Ritter joined the company in 1923 and has served as assistant superintendent of the Revolution Division since 1941. . . . A. Carl Lee has been named manager of the company's cotton department to succeed Sydney Bluhm who retired Dec. 31 after 49 years with the company. Mr. Lee was transferred to Cone's Greensboro office in August 1954 from his position as manager of the cotton department of the company's Dwight Division in Gadsden, Ala. Prior to joining the Dwight Division in 1951, Mr. Lee was with Hohenberg Bros. Co., Huntsville, Ala. Mr. Lee will be assisted in his new post by William C. Stinson Jr., who joined Cone in 1954.

L. A. Savage

L. A. Savage, manager of the cotton mills division, The Kendall Co., Charlotte, N. C., has been named a vice-president of the company. Mr. Savage succeeded H. K. Hallett as manager of the cotton mills division Jan. 1. . . . Harold T. Marshall, former manager of the company's Chicago, Ill., division, has been elected executive vice-president of the company, a post that has been vacant since 1951.

William S. Moore has resigned as superintendent of Hartwell Mills, Mill No. 2, Toccoa, Ga., to accept the position of superintendent of Florence (Ala.) Cotton Mills.

James M. McNutt has retired as president of Golden Belt Mfg. Co., Durham, N. C., after having been with the company nearly 51 years. Mr. McNutt joined Golden Belt in January 1906, six years after its organization. After serving in various capacities, he was named president of the firm early in 1939. Upon his retirement, he was honored by company officials, directors, business associates and friends at a testimonial dinner at which he was presented a color television set. . . . Succeeding Mr. McNutt is George R. Parks, formerly vice-president, who has been with the company since 1937. . . . C. Marshall Davis has been promoted from assistant secretary and assistant treasurer to succeed Mr. Davis as vice-president. Allan S. Knott, who was auditor, was named to succeed Mr. Davis as assistant secretary and assistant treasurer. Mr. Davis has been with Golden Belt 16 years, Mr. Knott 15.

Ralph J. Bachenheimer of Greenville, S. C., manager of the Haynsworth Division, Iselin-Jefferson Co. Inc., has been named "Textile Young Man of the Year" by the Young Men's Board of Trade, New York City. Mr. Bachenheimer joined Iselin-Jefferson in 1946 after attending the University of Zurich and completion of night courses at Columbia University. He advanced from the export division to become assistant head of the print cloth division in 1951. He was transferred last year to his present post with the Haynsworth Division.

Jim Collier, personnel director of Woodside Mills, Greenville, S. C., has been named to head up the newly-organized industrial relations department for all Woodside Mills' plants. Incorporated in the new department will be personnel, safety, public relations, athletics and recreation, and some phases of employee training. James Fuller, Woodside safety director, will now be director of safety and personnel in the new department. A. H. Fraser has been named personnel director of the Greenville Woodside plant succeeding Mr. Collier.

William C. Menzies Jr. has been appointed technical director of the Lowell (Mass.) Technological Institute Research Foundation to succeed George O. Langlais. Mr. Langlais resigned to accept a position in technical services with Monsanto Chemical Co. Mr. Menzies received his B. S. degree in textile engineering from Lowell Tech in 1951, and his M. S. degree in textile technology from Massachusetts Institute of Technology in 1955. Since the Summer of 1955 he has been with the Celanese Corp. of America, working in that firm's development engineering laboratories in Summit, N. J., and Charlotte, N. C. He recently had been promoted to assistant head of the processing and weaving department in the pilot laboratory.

Charles W. Moore has been named general sales manager of Quality Weaving Co., Philadelphia, Pa., manufacturer of woven labels. Mr. Moore was formerly with The Fletcher Works, Philadelphia, where he served as vice-president and sales manager for over 25 years.

Jack Harrison has been named sales manager of the narrow fabrics division of The Fletcher Works, Philadelphia, Pa. He succeeds Charles W. Moore, his father-in-law, who has resigned. Mr. Harrison had been Mr. Moore's assistant for the past five years.

Jerome Wylie has joined Palmetto Worsted Mills, Laurens, S. C., in a newly-created position in which he will have as his duties time and motion study, production planning and specialty developments in new yarns. Mr. Wylie is a 1954 graduate of Clemson College.

Hugh C. Land has been named general manager of the newly-organized industrial division of the Pennsylvania Salt Mfg. Co. The new division is a consolidation of the company's Sharples operations with the activities of the industrial chemicals division.

Included in the fully-integrated operations of the new division are plants at Natrona, Pa., Wyandotte and Riverview, Mich., Calvert City and Marion, Ky., and Houston, Tex. Mr. Land, formerly general manager of the industrial chemicals division, is a native of Colorado and a graduate of the University of Denver.

Lee F. Samler has been appointed vice-president and general manager of The Saran Yarns Co., Odenton, Md. The company, jointly owned by The Dow Chemical Co. and The National Plastic Products Co., has been primarily interested in the development of Saran, a man-made textile fiber, in staple, multifilament and tow. Mr. Samler, formerly vice-president of Saran Yarns Co., continues also in his post as technical director of The National Plastic Products Co., a position he has held for 16 years.

Edwin Stein, chairman of the board of Stein, Hall & Co. Inc., was honored on Dec. 12 at a testimonial dinner in celebration of his 40th anniversary of service with the company. The special ceermony, attended by more than 60 representatives of Stein Hall and its subsidiaries, was held at the Jansen Suite of the Waldorf-Astoria Hotel in New York City. A graduate of Yale University, Mr. Stein has held a number of key positions with Stein Hall and its affiliated companies over the years. In 1919 he became secretary of the firm and later was elected a vice-president, then executive vice-president. Upon the death of Frank Hall in 1944, he was elected president. He took his present post as chairman of the board in 1948.

Peter H. Conze has been appointed director of textile marketing of Celanese Corp. of America. He succeeds John W. Brooks, recently appointed vice-president and general manager of the Celanese textile division. Mr. Conze, who is 37, joined Celanese in June 1956 as textile district sales manager in New York. For 18 months previously, he had been associated with Midland Textiles Inc. During 1953 and 1954, he was plastics sales manager for Reeves Bros. and previously had been a vice-president of Susquehanna Mills Inc. with which he was associated for

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nine years. A native of Greenwich, Conn., Mr. Conze is a graduate of Princeton University.

Lester B. Gordon, a vice-president of the Solvay Process Division, Allied Chemical & Dye Corp., has been named head of the Solvay sales organization to succeed Harold F. Merritt. Mr. Merritt retired Dec. 31 after 43 years with the firm. Mr. Gordon has been with company since 1915. For many years he was located in Chicago where he was Western sales manager from 1931 to 1937. He was then transferred to New York as assistant director of sales. He became director of sales in 1947 and was appointed a vice-president a few years later.

R. W. Jacoby

Raymond W. Jacoby, immediate past president of the American Association of Textile Chemists & Colorists, rounded out 46 years in the textile dyeing, printing and finishing field last month as he retired as a consultant for the Ciba Co. and completed his A.A.T.C.C. term at the same time. Mr. Jacoby retired two years ago as New England manager of Ciba, remaining with the company since then as a consultant. Future plans, following a temporary life of leisure at his home in Mountain Lakes, N. J., include teaching, research and consulting. A graduate of the Massachusetts Institute of Technology, Mr. Jacoby joined Ciba in 1937. He has been granted five patents in the field of textile dyeing and finishing, and he has contributed many articles for publication over the years. Long active in the A.A.T.C.C., he headed the Rhode Island Section in 1948, served as national vice-president in 1952 and as national president the last two years. In 1951 he was presented the association's highest award—the Olney Medal—in recognition of his contributions in the field of textile chemistry.

Raymond G. Haislip Jr. of Greensboro, N. C., has been appointed Southern representative for United Aniline Co., manufacturing chemists, Norwood, Mass. Mr. Haislip was formerly with Geigy Chemical Co. Inc. at Charlotte, N. C., as a chemist and demonstrator. Prior to that he was a laboratory and dyehouse technician with Cone Mills Corp., Greensboro. In his new post he will cover the Southeastern states.

Herbert L. Werner, senior partner of Werner Textile Consultants, New York City and Atlanta, has been elected to the executive committee of the Textile Section of the New York Board of Trade.

L. E. Cash has been promoted to technical superintendent of quality control for Lane Cotton Mills Co., New Orleans, La. Mr. Cash was formerly assistant overseer of weaving.

A series of year-end staff changes have been announced by the fiber sales and service department of National Aniline Division, Allied Chemical & Dye Corp. William H. Poisson has been transferred from sales to a newly-created post of technical assistant to the director of fiber sales and service; George B. Monk has been appointed representative-at-large and will handle special sales assignments; Daniel J. Bruce has joined the department as market development supervisor.

J. Vernon Kirkman has been appointed assistant manager of the sales service department, textile division, Eastman Chemical Products Inc., with headquarters in Kingsport, Tenn. . . . Edgar P. Moore, sales service representative for the company in Providence, R. I., has been transferred to the company's Greensboro, N. C., territory.

Charles W. Dorn has been named director of the textile testing laboratories of Dexter Chemical Corp. Mr. Dorn retired last year as director of research for the J. C. Penney Co. after 26 years in that capacity. He is chairman of the executive committee on research of the American Association of Textile Chemists & Colorists, and is recognized as one of the leaders in the field of textile standards and testing procedures. Mr. Dorn will continue as consultant to Sanitized Inc. in addition to his work at Dexter.

E. Comer Walker has been promoted from assistant overseer to overseer of weaving and slashing at Opp (Ala.) Cotton Mills. He succeeds W. H. Beach who has resigned to accept a position at Lakeside Mills, Guntersville, Ala. Succeeding Mr. Walker as assistant overseer is Henry Workman.

Robert G. McKaig, assistant secretary of Whitin Machine Works since 1943, and manager of the repair sales office, retired Dec. 31 after 49 years with the company. Mr. McKaig joined Whitin in 1907 and was assigned to the superintendent's office. Transferring to the repair sales department in 1911, he was made assistant manager in 1918, and was named manager in 1950.

Richmond R. Roberts has been elected treasurer of Fieldcrest Mills Inc. effective Feb. 1, succeeding Robert A. Harris who was recently named vice-president in charge of manufacturing and secretary of the company. Mr. Roberts has been associated with the accounting, financial and operating departments of the General Electric Co. since 1936.

Harry L. Swain Jr. has been named manager of the Sao Paulo, Brazil, textile plant of The Firestone Tire & Rubber Co. Mr. Swain, who joined the company in 1926, has been assigned to the company's textile division headquarters at Akron, Ohio, since 1952. In his new post he succeeds R. M. Sawyer who is scheduled to return to Akron after serving 11 years in the South American plant.

Henry A. Weil has been named associate director of the New York application research laboratories of Sandoz Chemical Works Inc. Mr. Weil will supervise the subdivision of the laboratory which works on application of Sandoz dyes to new fibers, mill processes, and development of desirable dyeing methods and procedures. Mr. Weil was formerly with The Chemstrand Corp., where he was in technical sales service for two years. His experience with dyestuffs and fabrics includes four years as a textile engineer with General Motors Corp., and 12 years with the National Aniline Division of Allied Chemical & Dye Corp.

John L. Stickley, president of John L. Stickley Co., yarn agency with offices in Charlotte, N. C., and New York City, has been named "Man of the Year" in Charlotte by *The Charlotte News*. Mr. Stickley is currently serving a one-year term as president of Lions International.

Kenneth C. Loughlin, vice-president and general manager of the textile division of the Celanese Corp. of America, has been elected executive vice-president of the company. The position is a new one at Celanese and in this capacity Mr. Loughlin will have broad corporate administrative responsibilities. A native of Wilmington, N. C., Mr. Loughlin joined Celanese in 1929 following graduation from North Carolina State College with a Bachelor of Science degree in textile chemistry and dyeing. During his first three years with the company, he did laboratory and sales work in Charlotte, N. C. As Southern district manager between 1932 and 1951, Mr. Loughlin covered a 12-state area. In 1951 he was appointed vice-president in charge of the company's Southern textile sales and in the following year he became vice-president and general manager of the Celanese textile division. He has been a company director for the past two years. . . . Succeeding Mr. Loughlin as general manager of the textile division is John W. Brooks. Mr. Brooks joined Celanese in January 1955 as textile merchandising manager and became director of textile marketing nine months later. Previously he had been associated with Springs Mills Inc. for 5½ years, the last two years as vice-president and general sales manager. He also had been associated with Deering Milliken & Co. Inc. as assistant sales manager of consumer goods and for several years served in sales capacities with the former Nashua Mfg. Co. . . . George C. Hein has been appointed textile district sales manager in New York for Celanese. In addition to his new duties, Mr. Hein will continue to serve the company as merchandising manager of knitted fabrics promotion, a position he has held for two years. He has been with the company since 1937. . . . Peter D. Cooper is retiring as a vice-president and director of Celanese following 32 years with the company. Mr. Cooper came to this country from England in 1924 at the request of the company's founders—the late Drs. Henry and Camille Dreyfus—to serve as cost accountant of the firm. In 1945 he became a company vice-president; in 1949, a director, and he has served on the company's executive and finance committees.

Thomas F. Parks has been appointed to the newly-created position of assistant to the vice-president and general sales manager of The Chemstrand Corp. Mr. Parks has been with the company since last July. Previous associations include Vetterlein Bates Co., Boston, Mass., and Vetterlein Associates, Inc., Providence, R. I., as executive vice-president and director. He is a graduate of North Carolina State College.

OBITUARIES

W. M. Allison, 41, superintendent of the Startex (S. C.) Division of Spartan Mills for the past 11 years, died last month in Duke Hospital, Durham, N. C., after an illness of six months. A graduate of Clemson College, Mr. Allison joined Startex in 1938.

J. William Bourassa, 66, retired president and general manager of the American Bobbin Co., Lewiston, Me., died Jan. 4. Mr. Bourassa headed American Bobbin for more than 33 years prior to his retirement four years ago. Surviving are his widow, two sisters and four brothers.

William F. Brosnan, 51, assistant manager of the finishing division of Burlington Industries, died last month in Greensboro, N. C. A native of Lowell, Mass., Mr. Brosnan was a graduate of Lowell Technological Institute. He was with Verney Corp. in Peterborough, N. H., prior to joining Burlington 1½ years ago. He is survived by his widow, mother, three daughters, three sons and three brothers.

Southworth F. Bryan, 33, treasurer and a director of The Jefferson (Ga.) Mills Inc., was killed Jan. 4 in a plane crash at Jefferson. Also killed in the crash were William Duke, superintendent of the finishing department of Jefferson Mills, and William Johnson, the company pilot. The three men were returning from a business trip to Peoria, Ill. A 1945 graduate of Georgia Tech, Mr. Bryan is survived by his widow, his mother, three sons, a daughter, a sister and two brothers. One of his brothers—Morris M. Bryan Jr.—is president of Jefferson Mills, founded by the late Morris M. Bryan Sr.

Stuart W. Cramer Jr., 64, president of Cramerton (N. C.) Mills from 1939 to 1946, died Jan. 6 in Charlotte, N. C., following an illness of more than a month. A retired Army officer, Mr. Cramer was associated with Cramerton Mills from 1922 until 1946. During that period he was a director of the North Carolina Textile Foundation, a first vice-president of the American Cotton Manufacturers Association, and president of the Southern Combed Yarn Spinners Association. In 1944 he served as national vice-president of the National Association of Manufacturers. He is survived by his widow and two sons.

George Gilliam, 73, retired superintendent of Sterling Cotton Mills Inc., Franklinton, N. C., died Jan. 7 at Henderson, N. C. Mr. Gilliam, who retired in 1950, had been superintendent of Sterling since 1917. Prior to that he was superintendent of Harriet Cotton Mills, Henderson. Among survivors are four sons, two sisters and one brother.

John L. Hutcheson Sr., 89, chairman of the board of Peerless Woolen Mills, Rossville, Ga., died Jan. 1 in Chattanooga, Tenn. Mr. Hutcheson began his textile career in the late 1890s as manager of Park Woolen Mills, Rossville. In 1905 he sold his interest in that firm and organized Peerless, which began operation in 1906. Peerless was merged with Burlington Industries in 1952. Mr. Hutcheson is survived by two sons—John L. Jr., chairman of the executive committee of Peerless, and S. Lewis Hutcheson, president of the company—and two daughters.

mill news

CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES

DARLINGTON, S. C.—Although it was rumored that a major mill group was interested in buying Darlington Mfg. Co. at public auction last month, the prospective bid was never entered and the Deering, Milliken plant and equipment were sold piecemeal. The building and plant property were sold to Thackston & Redding Inc. of Spartanburg, S. C., representing Comer Machinery Co., Atlanta. Ben T. Comer Jr., president of Comer Machinery, said his firm had purchased the property with the intention of reselling it to another industrial concern. Piecemeal sale of machinery and equipment brought approximately $1,850,000, with a substantial portion of the equipment sold to other mills in the Deering, Milliken group. The only "going concern" offer was made by W. S. Nicholson, former Darlington plant manager, who bid $1,600,000. He did not disclose his associates. The group that rumor reported was interested enough in the operation to make an opening bid of $2,200,000 was not identified either.

TIFTON, GA.—Textron Inc. has sold the Tifton Division woolen plant of Amerotron Corp. to Edward Krock Industries Inc., a Worcester, Mass., dealer in industrial properties, for an undisclosed sum. The Tifton plant, which has been idle for some time, is equipped with approximately 1,920 spindles and 48 looms. Included also in the sale was Amerotron's woolen mill in Skowhegan, Me. A Textron spokesman said the sale was in line with the company's announced intention of reducing its textile operations to nine plants with an annual sales volume of $80 million.

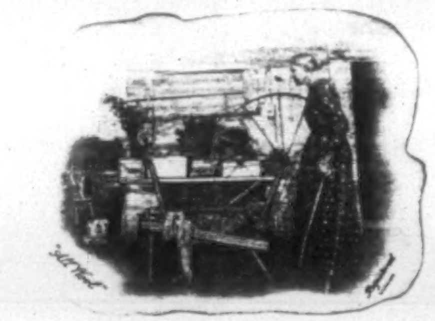
SHELBY, N. C.—Paul M. Neisler Sr. of Kings Mountain, N. C., has confirmed reports that he and his family are planning the construction of a plant in Shelby for the manufacture of fabrics. To date an agreement has been made between Mr. Neisler and Shelby Industries Development Inc. to exchange a tract of land in York County, South Carolina, owned by Mr. Neisler, for 23 acres near Shelby. The exchange is conditioned upon the construction by Shelby Industries Development of a plant suitable to Mr. Neisler's operation. It is expected that the transaction will be concluded within six months. Mr. Neisler is former treasurer of Neisler Mills Inc. which until October 1955 owned and operated seven plants in the Piedmont Carolinas.

BENNETTSVILLE, S. C.—Oak River Mills, a subsidiary of Mohasco Industries Inc. of Boston, Mass., has arranged for construction near here of a 150,000-square-foot, one-story plant to process synthetic and blended yarns for weaving carpets.

NEW YORK, N. Y.—Botany Mills Inc. has acquired the Smitherman Cotton Mills and related companies, with six plants, according to a joint announcement by A. M. Sonnabend, chairman and president of Botany, and Leon Salkind, president of the Smitherman group. Included in the sale is 100 per cent of the stock of eight corporations: Smitherman Cotton Mills Inc., Fairlane Fabrics Corp., Lumber River Cotton Mills, Greenwich Printing & Dyeing Corp., Lancashire Textile & Processing Corp., Allied Embroidery Corp., Marshall Cotton Mills Inc. and Uncas Printing & Finishing Co. Inc. The new group will be known as Calvine Mills Inc. and will be operated as a wholly-owned subsidiary of Botany Mills. The six plants are located in Charlotte, Troy and Lumberton, N. C.; New Bedford, Mass.; and East Greenwich, R. I. Mr. Salkind will continue as operating head, and management and policies will remain as in the past. Calvine Mills Inc. will complement the earlier acquisition by Botany of the Gurney group of six mills, now known as Botany Cottons Inc.

KERSHAW, S. C.—The Kershaw plant of The Springs Cotton Mills is being expanded for the second time in less than a year. Work has begun on excavation under the plant's card room to provide space for additional cards and spinning frames. Plans are being drawn to extend the weave room 180 feet to house additional looms. In May of last year the weave room was enlarged to provide space for some 700 more looms. Prior to that a 1951 addition provided space for 6,000 more spindles and 100 additional looms.

LEAKSVILLE, N. C.—Fieldcrest Mills Inc. plans to expand production of its woven bedspread mill here by some 20 per cent by the purchase of additional machinery from Monument Mills Inc., Housatonic, Mass. Included in the purchase were 66 looms, 50 jacquard heads of the large 1,248-hook type, four two-kier stainless steel package dyeing units, three eight-port dryers and other auxiliary dyeing equipment. The looms are said to be like new. Of the 66 looms, 42 are 120-inch, the remainder 112-inch. Fieldcrest will install 54 of the looms under the present jacquard heads. The other 12 have terry motions capable of weaving the loop-pile colonial-type spreads, and these will be grouped with the mill's present loop-pile models. To make room for the newly acquired looms, Fieldcrest will move 32 of the present Draper looms to the basement which has been made into a new weaving section.



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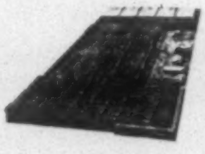

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Saco-Lowell Reports Steady Volume Of Orders

Saco-Lowell Shops, Boston, reports that many mills are purchasing additional equipment on a steady volume in an effort to improve operations. Orders received so far this year include both new labor saving and cost cutting machinery as well as improved assemblies for existing equipment. Along these lines, the Edenton (N. C.) Cotton Mills is modernizing its opening and picking. The Spartan Mills of Spartanburg, S. C., has taken another step in its improvement program with the installation in its No. 1 Mill of 124 Stay-Clean Duo-Roth changeovers. Bonnie Cotton Mill, Kings Mountain, N. C., is installing 31 sets of Duo-Roth standard changeovers. Marion (N. C.) Mfg. Co. has ordered two Model 56 combers along with ten Gwaltney frames, Model SG-3. Owens-Corning Fiberglas Corp., Anderson, S. C., has ordered six 200-spindle glass twisters.

Versa-Matic Drawing

Orders received shortly before the first of the year include the following orders for Versa-Matic drawing, all with 16x42-inch coilers: Dixie Mercerizing Co., Chattanooga, Tenn., 64 deliveries, Model DC-8A; Rockfish-Mebane Yarn Mills in Mebane, Hope Mills and Cumberland, N. C., 44 deliveries; 32 deliveries for the Strickland Cotton Mills, Valdosta Ga.; and 128 deliveries (64 breaker, 64 finisher drawing) now being installed in the Greenville, S. C., plant of the Woodside Mills. An installation of 96 deliveries of Model DC-7A is now in progress in the Mathews Plant of the Greenwood (S. C.) Mills. The new Sevierville, Tenn., plant of the Cherokee Textile Mills has also placed a recent order for 16 deliveries of Model DC-7A 3-over-4 Versa-Matic drawing.

Model 56 Comber

Among those mills recently including Model 56 combers in their modernization plans are the South Fork Mfg. Co., Belmont, N. C., the Laurens (S. C.) Mills, the Republic Plant No. 1 of J. P. Stevens & Co. in Great Falls, S. C., and the Mathews Plant of the Greenwood (S. C.) Mills. Currently being installed at South Fork are 12 combers with 15x36-inch coilers, equipment for converting four nine-inch lap winders to handle 10½-inch laps, and 40 deliveries of Model DS-2, 3-over-4 post-comber drawing changeovers. The installation of two 10½-inch lap winders and nine combers with 15x36-inch coilers is under way at the Republic Plant and 15x42-inch coilers have been specified for six Model 56 combers to be shipped to Laurens, and for the nine combers ordered for Greenwood.

Stay Clean Duo-Roth

Recent additions to the list of mills now operating or installing Saco-Lowell Duo-Roth Stay Clean spinning changeovers are the Dan River Mills, Danville, Va.; the Clinchfield Mfg. Co. of Marion, N. C.; Pacific Columbia Mills, Granby Plant, Columbia, S. C.; Hartsville (S. C.) Cotton Mill; Bibb Mfg. Co., Columbus and Porterdale, Ga.; Elk Cotton Mills, Fayetteville, Tenn.; and Clifton (S. C.) Mfg. Co. Over 100,000 spindles of Duo-Roth Stay Clean changeovers have been shipped in the past several months. Included were 114 sets to Bibb in Columbus and 64 sets to Bibb's Osprey Plant in Porterdale, a total of over 45,000 spindles and the shipment of 140 sets comprising 38,500 spindles to Pacific. Dan River, Clinchfield and Bates have placed orders for 247 sets, 118 sets and 40 sets, respectively, for a total of over 95,000 spindles.

Gwaltney Spinning

Notable SG-1 Gwaltney installations spinning a wide range of cotton counts include the over 300 frames operated by Cannon Mills Co., Kannapolis, N. C.; 138 frames at Werthan Bag Co., Nashville, Tenn.; and 57 frames at the Ninety-Six (S. C.) Plant of Greenwood (S. C.) Mills. Alice Mfg. Co., Easley, S. C., is utilizing Gwaltney spinning at both its Easley Plants and at its recently constructed Elljean Plant where 180 Gwaltney SG-1 frames comprise the entire spinning operation. The Mineola Plant of the Cone Mills Corp. in Gibsonville, N. C., now spins all its warp yarns for its high quality sateens on 86 SG-1 frames. The A. M. Smyre Mfg. Co. of Ranlo, N. C., and the Russell Mfg. Co. of Alexander City, Ala., producers of quality knitting yarns, also have extensive installations of Gwaltney spinning. In the coarse goods field, short staple cotton up to one-inch is spun on ten SG-1 frames by Quaker Meadows Mills, Hildebran, N. C., for use in its coarse sales yarns and twines.

Dan River Mills, Danville, Va., has recently purchased 44 SG-1 frames, 240 spindles, four-inch gauge, 2¾-inch ring, with the new Tru-Set top arm weighting for spinning combed yarn in its No. 1 Mill of the Schoolfield Division. An additional ten sets of Gwaltney frames have been ordered by Dyersburg (Tenn.) Cotton Products. These 240-spindle, four-inch gauge, 2¾-inch ring frames will be placed in production on knitting yarns.

Whitin Reports Substantial Machinery Orders

Whitin Machine Works, Whitinsville, Mass., has announced the following recent machinery sales:

West Point Mfg. Co., West Point, Ga., has ordered 160 deliveries of new Even-Draft drawing, 52 roving frames, 12 Superflex spinning frames and material for applying Super-Draft to 27,600 spindles as part of a large-scale modernization program. The new equipment will be placed in several of the firm's plants. The Fairfax (Ala.) Division will acquire 96 deliveries of new Whitin drawing, regular draft and two Inter-Draft roving frames, all 12 x 6½-inch and 88 spindles each. The remaining 64 deliveries of drawing will be installed in the Riverdale (Ala.) Division. At the Langdale (Ala.) Division, eight Whitin 76-spindle, 12x6½-inch regular draft roving frames and 12 Superflex spinning frames will be installed. These will have 252 spindles, four-inch gauge, 2¾-inch rings and nine-inch traverse, adjustable to 11 inches. Twenty-eight Whitin regular draft 12x6½-inch roving frames, 88 spindles each, will be installed in the Lanett (Ala.) Division. In this mill, 115 H & B spinning frames will be modernized by the application of Whitin Super-Draft. Total number of spindles involved is 27,600.

Belton Yarn Mills, Belton, S. C., has purchased 15 Model E wool spinning frame pieceouts, 40 spindles each, and two Model E wool spinning frames, 120 spindles each. All frames will have 6½-inch gauge, 11-inch traverse, five-inch ring, with a total of 840 spindles.

Pacific Mills, Raeford, N. C., a division of Burlington Industries, is converting two Whitin Super-Draft roving

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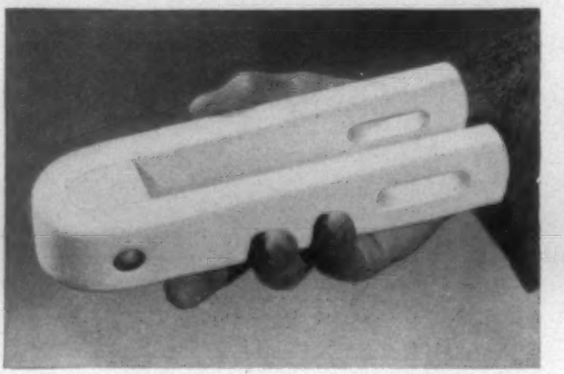

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frames to Whitin American System Quik-Set equipped with Type ASW4 system of Long-Draft, 108 spindles each, 10x5x8 inches.

ARISTA MILLS CO., Winston-Salem, N. C., has purchased four Hi-Pro Long-Draft roving frames, 92 spindles each, 12x6½x10-inch. Also on order is change-over material to apply Super-Draft to 118 spinning frames having a total of 27,888 spindles.

GASTONIA COMBED YARN CORP., a division of Botany Cottons, Gastonia, N. C., has purchased 48 deliveries of Model M Even-Draft drawing frames, 12 Model J3 combers, six Long-Draft roving frames and one Super-Draft roving frame, all having 120 spindles each, 10x5x8-inch.

WOONSOCKET WORSTED CO., Farnell Mills Division, Laurens, S. C., is converting ten Whitin Model BW worsted spinning frames, 200 spindles each, with a total of 2,000 spindles, to the Whitin system of Long-Draft.

VIRGINIA WOOLEN CO., Winchester, Va., has ordered 16 Whitin wool spinning frame pieceouts, Model E, with a total of 480 spindles. Eight of the frames will have 24 spindles each, 6¼-inch gauge, and the remaining eight will have 36 spindles each, 6½-inch gauge. Also on order are four Whitin Model E wool spinning frames, 144 spindles each, 6½-inch gauge, 12-inch traverse, five-inch ring, with a total of 576 spindles.

VIRGINIA MILLS, Swepsonville, N. C., is purchasing necessary material to increase traverse from eight inches to nine inches on 17 spinning frames. Total number of spindles involved is 4,092.

PARK YARN MILLS, Kings Mountain, N. C., has modernized 66 spinning frames with the application of Whitin Super-Draft. Total number of spindles involved is 17,984.

CALDWELL COTTON MILL CO., Hudson, N. C., is converting 44 Whitin spinning frames to Whitin Super-Draft. Total number of spindles involved is 11,628.

HUDSON COTTON MFG. CO., Hudson, N. C., is modernizing 24 Whitin spinning frames with the application of Whitin Super-Draft. Total number of spindles involved is 6,336.

WHITMIRE PLANT, J. P. Stevens & Co. Inc., Whitmire, S. C., is converting 81 spinning frames to Whitin system of Super-Draft. A total of 20,096 spindles is involved.

BORDEN MILLS INC., Kingsport, Tenn., has purchased two K9 automatic feeders, two Axi-Flo cleaners, Model B, two Model U1 cage sections, two Model C4 overhead condensers, and one Model A return air condenser.

RIVERSIDE MILLS INC., Augusta, Ga., has ordered two wool spinning frames, 128 spindles each, 6½-inch gauge, five-inch ring and 11-inch traverse.

HARRIET COTTON MILLS, Mill No. 1, Henderson, N. C., has purchased 22 Whitin Superflex spinning frames, 240 spindles each, four-inch gauge, 2¾-inch D.A. ring, ten-inch traverse, with a total of 5,280 spindles; ten Even-Draft drawing frames, and six Regular Draft roving frames, 96 spindles each, 12x6½x10-inch. The machinery will be installed in a new building now being constructed.

CARLTON YARN MILLS, Carlton Division, Kings Mountain, N. C., is converting five spinning frames to Whitin Super-Draft. Number of spindles being changed over is 1,224.

THE BORDEN MFG. CO., Goldsboro, N. C., has ordered 32 deliveries of Even-Draft drawing.

CANNON MILLS CO., Concord, N. C., is adding two

Whitin-Schweiter automatic filling winders, Type MS, and one empty bobbin loading device.

HENDERSON COTTON MILLS, Henderson, N. C., has ordered 16 Superflex spinning frames, 252 spindles each, four-inch gauge, ten-inch traverse, 2½-inch D.A. ring, with a total of 4,032 spindles.

GREENWOOD MILLS, Durst Plant, Greenwood, S. C., is installing six Whitin Axi-Feed attachments and one Axi-Flo cleaner.

TRIO MFG. CO., Forsyth, Ga., has ordered two Hi-Pro Long-Draft roving frames, 88 spindles each, 12x6½x10-inch.

WOODSIDE MILLS, Greenville, S. C., is converting 283 Whitin Model F2 spinning frames to Whitin Super-Draft, involving a total of 85,392 spindles. One hundred and seventy-one of these frames are in the Greenville Plant, 60 in Mill No. 2, Liberty, S. C., and 52 in Mill No. 3, also in Liberty. Ten Whitin Inter-Draft roving frame pieceouts, 10x5x8-inch, have been purchased for the Liberty plants; two frames having six spindles each, and eight having 12 spindles each.

PINE TREE CO., Dahlonega, Ga., is installing 16 Whitin Model E wool spinning frames, 160 spindles each, 7½-inch gauge, 5½-inch ring, 12-inch traverse with a total of 2,560 spindles.

Universal Shipping First Unifil Winders

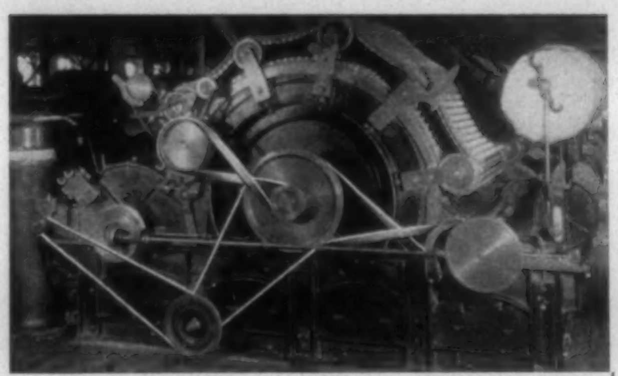
Universal Winding Co. has disclosed that initial orders for its Unifil Loom Winders have been received from Cone Mills Corp., Greensboro, N. C.; Dover Mill Co., Shelby, N. C.; Hoosac Mills Corp., New Bedford, Mass.; Pansy Weaving Mills, Pawtucket, R. I.; and United Merchants & Manufacturers Inc., New York City. This month Universal started shipment on the first lot of Unifil Loom Winders ordered by Amerotron Corp. and Ponemah Mills for winding filament yarn. The new orders announced are for units to wind spun filling yarns. Test units have been operating at Hoosac and Pansy Mills for the past year.

Program For Cotton Research Clinic

More than than 200 mill executives and textile scientists will gather in Savannah, Ga., in February to consider various ways of improving cotton textile processing. The eighth annual Cotton Research Clinic will be held at the General Oglethorpe Hotel in Savannah on Wednesday, Thursday and Friday, Feb. 27-28 and March 1. Customarily held in either the Georgia-Alabama or the Carolinas mill areas, the clinic moves to Savannah this year after three consecutive years in Pinehurst, N. C.

General conference chairman is L. G. Hardman Jr., president of Harmony Grove Mills. Mr. Hardman, who is also first vice-president of the American Cotton Manufacturers Institute, will address the conferees at the clinic banquet on Thursday evening. M. Earl Heard, vice-president in charge of research at the West Point Mfg. Co., Shawmut, Ala., is chairman of the clinic's advisory committee, and has served in a top advisory capacity since the clinic's early days.

The opening session will be concerned with carding efficiency and waste removal. Presiding will be William Pittendreigh, general superintendent of Riegel Textile Corp., Ware Shoals, S. C., and current president of the Southern Textile Association. Papers scheduled are: "High Production Carding," John F. Bogdan, director, processing research



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School of Textiles, North Carolina State College, Raleigh; "Mill Experience in Full-Scale Changeover to Metallic Card Clothing," Joseph L. Delany, general superintendent, Joanna (S. C.) Cotton Mills Co.; "Current Mill Practice in Waste Removal," Robert V. Miraldi, textile engineer, utilization research division, National Cotton Council.

The second technical session will be devoted to improved fiber technology. Stuart Sherman, development manager, United States Rubber Co., Winnsboro, S. C., will preside. Papers scheduled are: "Cotton Fiber Strength as a Function of Fiber Length and Gauge Length, A Progress Report," Dr. Kenneth L. Hertel, director, textile research laboratory, University of Tennessee, Knoxville; "Factors Affecting Strength in the Cotton Breeding Program," Thomas Kerr, U. S. Department of Agriculture, agriculture experiment station, Beltsville, Md.; "The Effect of Processing on Cotton Fiber Properties," Dr. Ludwig Rebenfeld, director, cotton project, Textile Research Institute, Princeton, N. J.

Cleveland Adams, dean of the School of Textiles, Auburn (Ala.) Polytechnical Institute, will preside over the third technical session. Scheduled papers include: "Uniformity Analysis of Yarns, Rovings and Slivers Using Beta Radiation," Philip R. Ewald, agent-engineer, spinning laboratory, University of Tennessee, Knoxville; "A Sliver Evener for Roving Frames," Dr. Hugh M. Brown, dean, School of Textiles, Clemson College, Clemson, S. C.; "The Effect of Roll Run-out in Spinning on Yarn Quality," James E. Dougherty, Institute of Technology, Charlottesville, Va.; "The Relation of Twist to the Construction and Strength of Cotton Rovings and Yarns," Charles B. Landstreet, U.S.D.A. engineer at the fiber spinning laboratory, University of Tennessee, Knoxville.

Opening and cleaning cotton at mills will be subjects for discussion at the fourth and final session, presided over by F. H. Martin, director of research, The Springs Cotton Mills, Fort Mill, S. C. Papers scheduled are: "Some Phases of Opening and Picking Evaluation," Woodbury K. Dana, assistant to the president, Saco-Lowell Shops, Biddeford, Me.; "Studies on Cotton Opening and Cleaning," Dr. Zoltan S. Szaloki, assistant director of research, Whitin Machine Works, Whitinsville, Mass.

The final session also will include a discussion of the Southern Regional Research Laboratory's integrated system for opening and cleaning cotton. Two papers scheduled for this part of the program include: "The Opener-Cleaner," Ralph A. Rusca, head, machinery and methods unit, cotton mechanical processing section, S.R.R.L., New Orleans, La.; "The Carding Cleaner and the Integrated Unit," George J. Kyame, engineer, cotton mechanical processing section, S.R.R.L.

Plans Made For A.C.M.I. Convention

American Cotton Manufacturers Institute President F. E. Grier of Greenwood, S. C., has announced that the trade

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association's annual convention would be held in Palm Beach, Fla., April 4-6. An attendance of between 800 and 1,000 is expected. Mr. Grier said that details of the convention would be announced later, but it is expected that developments in the battle against textile imports from low-wage countries will be an important topic.

Officers and eight new board members will be elected at the convention. If custom is followed, L. G. Hardman Jr. of Commerce, Ga., the first vice-president, will become president. Other officers of the institute are: Halbert M. Jones of Laurinburg, N. C., second vice-president; Robert C. Jackson, Washington, executive vice-president; and F. S. Love, Charlotte, secretary-treasurer.

Convention information, including room reservation forms, transportation schedules and other data, have been sent to A.C.M.I. member mills from Maine to Texas. Similar information will be sent to associate members from allied industries in the near future.

A meeting of the institute's board of directors on April 3 will precede the convention. A luncheon meeting of the new board will close the convention Saturday afternoon, April 6.

S. C. Association Announces Meeting Dates

The annual meeting of the South Carolina Textile Manufacturers Association will be held May 30-June 1 at The Cloister, Sea Island, Ga., according to John Cauthen, executive vice-president. Association directors will meet Thursday afternoon, May 30, with general business sessions scheduled for the mornings of May 31 and June 1.

Industrial Waste Parley Set April 1-2

The sixth annual Southern Municipal and Industrial Waste Conference will be held April 1-2 at North Carolina State College, Raleigh, in the Student Union Building. The program for this year will feature textile waste disposal through municipal facilities.

Look For Your D. & B. Form Soon

Next month, Dun & Bradstreet's 140 United States offices will mail annual requests for year-end statements to 2,649,782 business concerns listed in the *Dun & Bradstreet Reference Book*. Ninety-eight years ago, the first *Reference Book* published contained 18,513 U. S. business listings, for 26 states. Today 34 of the 48 states have more business listings than the entire country had nearly a century ago.

Nobody in the credit reporting agency remembers when the first statement request was mailed out nationwide. But men with generation-long careers in the business say, "We've done this ever since I've been here."

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Each year the statement request includes a message from the agency's president. Currently, President J. Wilson Newman writes: "It does not matter whether your business is large or small or middle-sized. The vast majority of business enterprises in this country are small to medium. American business could not exist if sales were made and credit extended only to the premium concerns. One thing is certain, however. You get more merchandise and quicker shipments

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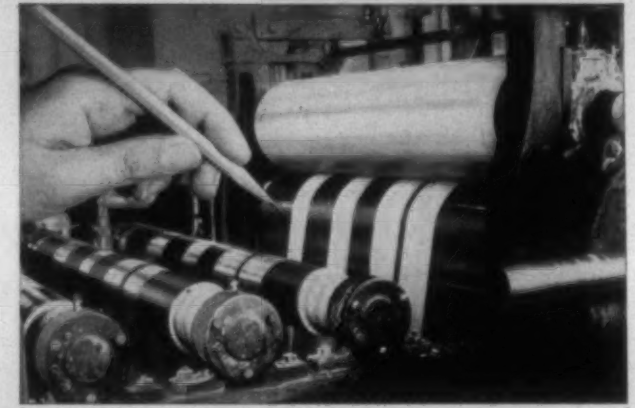

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when your credit position is available to the supplier for prompt decisions. No man likes to step into the dark. When he sees where his goods are going, and knows something about the man who is going to handle them for resale, he makes prompt credit decisions."

The letter concludes with an offer of a new booklet, *The Pitfalls in Managing A Small Business,* which is a case history of the more common problems facing business men today. Single free copies are available to readers requesting them from Dun & Bradstreet Inc., 99 Church Street, New York 8, N. Y.

The time taken by the average business man or his accountant to fill out a financial statement is saved in establishing credit relationships with those from whom purchases of merchandise are to be made. A single statement submitted to the credit agency is made available to all subscribers of the agency who indicate a credit interest. There is no charge or cost of any kind to the business man for processing his statement.

The information furnished in the statement is handled confidentially. It is made available only to subscribers of Dun & Bradstreet who agree to hold all information in strict confidence and to use it only as an aid in determining the advisability of granting credit or insurance, and for no other purpose. These subscribers pay the entire cost.

When the business man mails in his statement, he has taken the first step toward establishing or maintaining his credit standing. For it is the financial statement that is one of the important parts of a credit report on a business. Credit managers and insurance underwriters find financial statements helpful and often necessary in order to check orders or to grant insurance.

Upon receipt of each financial statement, one of Dun & Bradstreet's 1,800 trained credit reporters takes over and includes the statement as part of the credit report on that business. The report includes an analysis of the financial statement; a history of the business; and a description of what the business does and how it pays its bills.

On the basis of the information in the credit report, a rating is assigned and this rating, together with the name, is made a part of the *Dun & Bradstreet Reference Book.* This book is revised every 60 days so that whenever a business man makes purchases, the information is up-to-date. The listing in the *Reference Book* contains a standard industrial classification code number which identifies the line and kind of business. The rating is composed of two elements. A letter of the alphabet, indicative of the financial strength, and a numeral, reflecting a composite of the financial stability, character and payment record.

Textile Industry Spotlighted on T-V Program

The textile industry was featured on "Press Conference," a nationwide television program sponsored by Corn Products Refining Co., two days before Christmas. In the salute to the textile industry mention was made of the part that corn starch plays in the industry, as well as the importance of textiles in everyday living. Corn Products Refining, through its Corn Products Sales Co., is one of the textile industry's largest suppliers of corn starches.

"Press Conference" is a program on which a dozen top newspapermen in Washington or New York interview a personality currently in the top of the news on a subject of national or international importance at the moment.

Investment Survey Views Textile Prospects

High employment and an estimated three per cent rise in disposable consumer income visualized for 1957 provides a favorable background for textile distribution this year, says the *Value Line Investment Survey* published by Arnold Bernhard & Co. However, despite the prospect for a modest upturn in both unit and dollar sales, no marked improvement in profits appears likely.

Unfilled orders carried over into 1957, the *Value Line Survey* continues, will include a substantial amount of business taken at the low prices reached in the 1956 September quarter. Subsequent increases in selling prices of many types of fabrics have done no more than offset the higher wage rates now being paid by Southern mills. The *Value Line Survey* looks for little change in earnings next year for the textile industry as a whole.

Over the next three to five years, the *Value Line Survey* looks for continued growth in sales as the nation's population increases. Meanwhile, the number of spindles in operation has continued to decline in 1956. The *Value Line Investment Survey* concludes that a modest recovery in profit margins should occur over this longer term as the textile industry's productive capacity is brought into closer alignment with demand.

Rayon, Acetate Shipments Fall Below 1955

The United States rayon and acetate producing industry shipped approximately 1,130,000,000 pounds of yarn and staple fiber last year, according to the *Textile Organon*, statistical bulletin of the Textile Economics Bureau Inc. This figure, based on shipments for the first 11 months of 1956, compares with 1,261,900,000 pounds shipped in 1955, and reflects a loss of 10½ per cent compared to the earlier year. However, the *Organon* points out, 1956 shipments are only 1½ per cent under the 1952-1954 yearly average of 1,145,700,000 pounds.

Combining imports with United States deliveries, the *Organon* estimates that consumption last year approximated 1,200,000,000 pounds, a figure 15½ per cent less than the record total of 1,419,100,000 pounds in 1955, but slightly above the 1954 consumption of 1,154,700,000 pounds.

On the basis of imports through September, the *Organon* estimates that the 1956 annual rate of rayon and acetate filament yarn imports was 2,000,000 pounds, a small decline from the 2,381,000 pounds imported during 1955 and the 2,448,000 imported in 1954. The annual rate of non-cellulosic man-made filament yarns continued small in 1956 at 175,000 pounds. Projected imports of rayon staple in 1956 indicate a total of around 91,000,000 pounds, a figure substantially below the record 171,943,000 pounds imported during 1955.

On the export side, shipments abroad of all man-made yarn and staple, excluding waste, during the first nine months of 1956 were at an annual rate of 57,000,000

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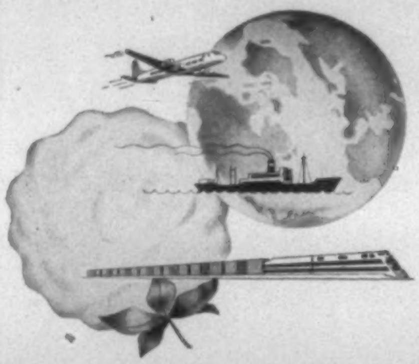

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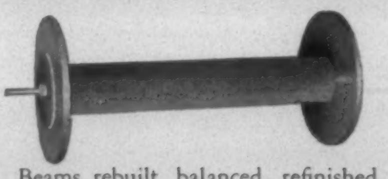

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pounds. This total, if realized, would be 34 per cent above the 1955 exports of 42,649,000 pounds.

The *Organon* computes civilian per capita consumption of cotton, wool and man-made fibers in the United States through the middle of 1956 at an annual rate of 36.1 pounds. This was a decline of 0.3 pounds from the previous year but 3.6 pounds or 11 per cent above the 32.5 pounds of 1954. The annual total rate was made up of 23.8 pounds of cotton, 3.2 pounds of wool and 9.1 pounds of man-made fibers. Compared to 1955, this rate of consumption reflects an increase in cotton usage of 0.6 pounds or 2½ per cent and a gain of 0.3 pounds or 10½ per cent in wool usage, and a decline of 1.2 pounds or 11½ per cent in man-made fiber consumption.

In an analysis of production capacity of man-made fibers, the *Organon* estimates that currently the industry can manufacture 2,144,000,000 pounds per year. As of next July, the capacity of the industry is expected to increase eight per cent or to 2,315,000,000 pounds. By March 1958, the annual capacity is expected to be 2,468,000,000 pounds and a further increase to 2,574,000,000 pounds is expected by November of next year.

First Cotton Fiber Testing Class Being Held

The first of five 1957 classes in cotton fiber testing opened Jan. 7 at Clemson, S. C., according to John T. Wigington, director of technical service for the American Cotton Manufacturers Institute. Each course lasts about five weeks. Opening dates for other classes are March 4, April 29, Aug. 5 and Oct. 21.

The classes are designed primarily for technicians in the cotton departments of mills as well as for personnel from yarn and fabric testing laboratories of mills, plant breeders and cotton merchants. Trainees in the cotton fiber training program are taught to operate instruments for measuring fiber fineness, fiber length and length uniformity, fiber strength and fiber maturity. Mrs. Helen G. Beasley, the A.C.M.I. fiber technologist, conducts the classes.

Mr. Wigington said most mills felt that new technicians should have the training and that many mills had found it profitable to send workers back regularly for refresher courses. The program was started in 1944.

The packaging parade needs more direction than it is getting in the field of textiles and soft goods generally, according to Edward F. Skinner, vice-president of the factoring firm of Meinhard & Co. Inc. "The ultimate success of a mill-packed product depends in large part on its adaptability to retail merchandising," he said. "After all, prepackaged goods require special store fixtures, and when they do not fit into a retailer's self-selector units, they might just as well be sold in bulk." Accordingly, he recommended closer co-operation between manufacturers and retailers in the design of mill-packs.

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